CITY OF AUSTIN, TEXAS PUBLIC WORKS DEPARTMENT

06/04/2021

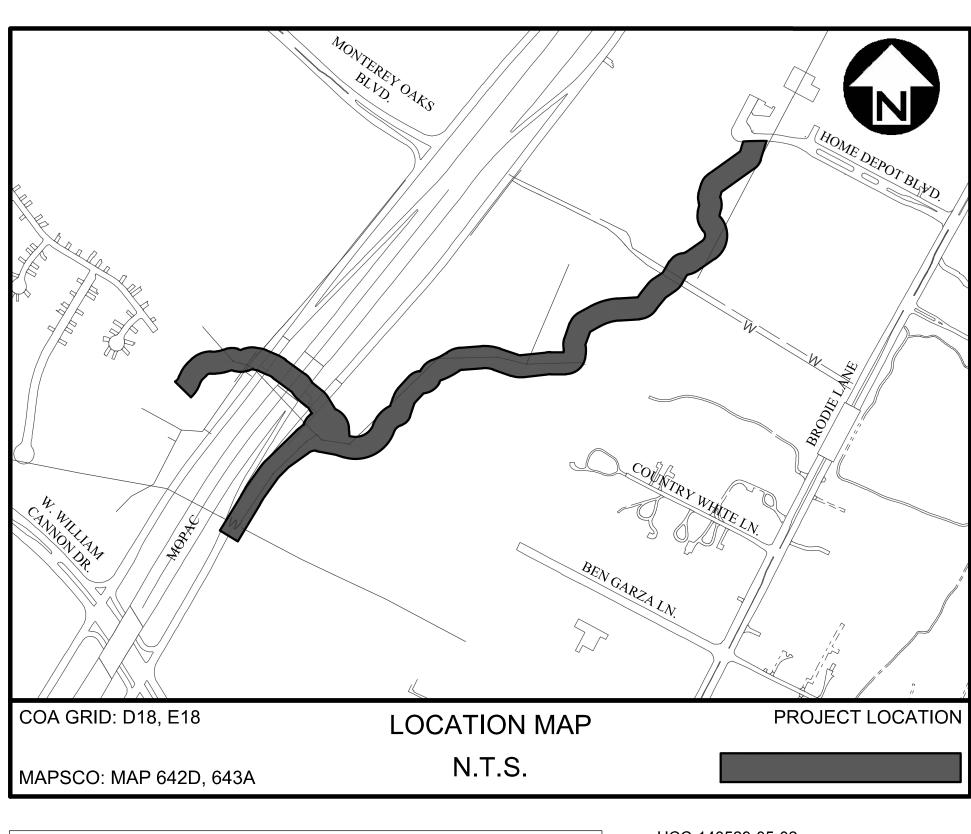


VIOLET CROWN TRAIL - NORTH PHASE 2A

C.I.P. ID.: 10796.011

FEDERAL PROJECT NUMBER STP 2021 (803) TP TXDOT CSJ-0914-04-311

SHARE USE PATH DESIGN SPEED = 12 MPH



UCC-140529-05-02 **AULCC NUMBER**

PARKING ON TXDOT LANES AND SHOULDERS IS NOT ALLOWED. LANE CLOSURES ON TXDOT TRAVEL LANES AND SHOULDERS ONLY ALLOWED FROM 9 AM TO 3 PM OF 1 LANE CLOSED AT A TIME.

NO STORAGE OF EQUIPMENT OR MATERIAL IN TXDOT RIGHT OF WAY.

NOTES:

- 1. CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS DEPARTMENT 24 HOURS PRIOR TO STARTING CONSTRUCTION OR
- 2. CONTRACTOR SHALL CALL "ONE CALL" AT 811 FOR UTILITY LOCATIONS AT LEAST 48 HOURS PRIOR TO ANY WORK IN CITY EASEMENTS OR STREET RIGHT OF WAYS.
- 3. THIS PROJECT IS LOCATED WITHIN THE WILLIAMSON CREEK WATERSHED (CLASSIFIED AS SUBURBAN) AND SHALL BE DEVELOPED. CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH CHAPTER 25 OF THE CODE OF THE CITY OF AUSTIN.
- 4. A PORTION OF THIS SITE IS LOCATED WITHIN PARKLAND OR LAND USED FOR PARK PURPOSES. (IF SUCH LAND IS INCLUDED, DOCUMENTATION OF PARKS AND RECREATION DEPT APPROVAL IS REQUIRED AT THE TIME OF SUBMITTAL FOR GENERAL PERMIT PROGRAM APPROVAL.)
- 5. A PORTION OF THIS SITE IS LOCATED WITHIN THE 100-YEAR FLOODPLAIN, PER CITY OF AUSTIN AND FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP(S) NO 48453C0580H. DATED 09/26/2008.
- IS WITHIN THE EDWARDS AQUIFER RECHARGE ZONE AS REGULATED BY THE TEXAS COMMISSION ON ENVIRONMENTAL
- 7. THERE ARE CRITICAL ENVIRONMENTAL FEATURES WITHIN 150' OF ANY PORTION OF THIS PROJECT. A FIELD INVESTIGATION HAS BEEN PERFORMED AS A PART OF THIS PROJECT.
- 8. THE STANDARD SHEETS INCLUDED IN THIS PLAN SET WERE PROVIDED BY THE GENERAL PERMIT PROGRAM OFFICE FOR USE ON GENERAL PERMIT PROJECTS ONLY. IF ANY MODIFICATIONS TO THE SHEETS WERE MADE, THEY ARE CLEARLY INDICATED ON THE SHEET ITSELF AND IN THE COVER SHEET INDEX.
- 9. ADDITIONAL TRENCH E/S CONTROL: TRIANGULAR SEDIMENT FILTER DIKE WILL BE INSTALLED ACROSS FULL WIDTH OF TRAFFIC CLOSURE AND DOWNSTREAM OF CONSTRUCTION AREA. PERPENDICULAR TO CURB. FILTER DIKE TO FOLLOW TRAFFIC HANDLING.
- 10. PROJECT SCHEDULE MUST BE APPROVED BY THE GENERAL PERMIT PROGRAM (GPP) COORDINATOR. INSTALLATION AND REMOVAL OF TEMPORARY AND PERMANENT EROSION/SEDIMENTATION CONTROLS MUST BE REFLECTED IN THE SCHEDULE.
- 11. APPROPRIATE EASEMENTS/APPROVALS MUST BE SECURED AND DOCUMENTED FOR PROJECT AREAS LOCATED OUTSIDE OF RIGHT OF WAYS. NO WORK SHALL BE PERFORMED WITHIN THESE AREAS UNTIL ASSOCIATED RIGHT OF ENTRY HAS BEEN SECURED. ADDITIONALLY, THIS PROJECT WILL NOT BE CONSIDERED COMPLETE UNTIL ALL RECORDED EASEMENT DOCUMENT NUMBERS HAVE BEEN OBTAINED AND SHOWN ON PLANS.
- 12. CONTRACTOR SHALL STAKE ALL PROPOSED SERVICE CONNECTIONS LOCATED WITHIN THE CRITICAL ROOT ZONE OF SHALL CONSIST OF A LATH WITH NAIL AND PAINT MARKINGS. IN CASES WHERE A STAKE CANNOT BE PLACED WITHOUT DAMAGING PROPERTY, CONTRACTOR MAY USE PAINT ONLY, ONCE STAKING IS COMPLETED, IT IS THE CONTRACTOR'S RESPONSIBILITY TO INFORM THE CITY OF AUSTIN'S CONSTRUCTION INSPECTOR WITHIN TWENTY-FOUR HOURS. THE CITY OF AUSTIN'S CONSTRUCTION INSPECTOR WILL THEN COORDINATE A FIELD REVIEW OF THE SERVICE LOCATIONS WITH THE GENERAL PERMIT PROGRAM COORDINATOR AND PROPERTY OWNERS. SERVICE LINE LOCATIONS MAY BE ADJUSTED BASED ON THE REVIEW AND WILL BE RESTAKED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. ALL SERVICE LINE STAKING SHALL BE MAINTAINED UNTIL THE SERVICE IS INSTALLED.

GENERAL PERMIT PROGRAM APPROVAL DOES NOT CONSTITUTE UTILITY ALIGNMENT/ASSIGNMENT APPROVAL RELEASE OF THIS APPLICATION DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY, AND ADEQUACY OF HIS/HER SUBMITTAL, WHETHER OR NOT THE APPLICATION IS REVIEWED FOR CODE COMPLIANCE BY CITY

AN ADMINISTRATIVE VARIANCE HAS BEEN GRANTED FROM LDC 25-8-281(C)(2)(B) TO ALLOW FOR THE CONSTRUCTION OF AN IMPERVIOUS TRAIL WITHIN THE CRITICAL ENVIRONMENTAL FEATURE BUFFER. THE TRAIL OR ANY ASSOCIATED CONSTRUCTION ACTIVITIES MUST NOT BE LOCATED WITHIN 50 FT FROM THE EDGE OF THE CRITICAL ENVIRONMENTAL

NO WORK OR CLOSURES ALLOWED ON MOPAC MAIN LANES.

GENERAL PERMIT PROGRAM CORRECTIONS RECORD

FOR USE BY GENERAL PERMIT OFFICE ONLY

NO	DESCRIPTION	BY	CORRECT (C) ADD (D) VOID (V) SHEET NO.'s	TOTAL # SHEETS IN CORRECTION PLAN SET	GENERAL PERMIT PROGRAM APPROVAL	APPROVAL DATE

SPECIFICATIONS ADOPTED BY THE CITY OF AUSTIN AND SPECIFICATION ITEMS LISTED AND DATED AS FOLLOWS, SHALL GOVERN ON THIS PROJECT: REQUIRED CONTRACT PROVISIONS FOR ALL FEDERAL-AID CONSTRUCTION CONTRACTS (FORM FHWA 1273, MAY 2012).

PROJECT INFORMATION:

STREET ADDRESS: 4003 BEN GARZA LANE 1200 HOME DEPOT BLVD AUSTIN, TX78745

CLIENT/SPONSOR:

CITY OF AUSTIN PUBLIC WORKS DEPARTMENT COMMUNITY SERVICE DIVISION 505 BARTON SPRINGS RD. STE. 800 AUSTIN, TEXAS 78704

CONTACT: JANAE SPENCE, P.E. PHONE: (512) 974-3159 EMAIL: janae.spence@austintexas.gov

PROJECT MANAGEMENT:

CITY OF AUSTIN PUBLIC WORKS DEPARTMENT PROJECT MANAGEMENT DIVISION 6800 BURLESON ROAD, BLDG. 312, SUITE 200 AUSTIN, TEXAS 78744

CONTACT: JAVI GONZALEZ, P.E. PHONE: (512) 974-5635 EMAIL: javi.gonzalez@austintexas.gov

SUBMITTAL PREPARED BY:



AUTHORIZED FOR CONSTRUCTION UNTIL

MARCH 24, 2020 SUBMITTAL DATE

Engineering Services DIVISION

CITY OF AUSTIN PUBLIC WORKS DEPARTMENT **ENGINEERING SERVICES DIVISION** 505 BARTON SPRINGS RD., STE. 900 AUSTIN, TEXAS 78704

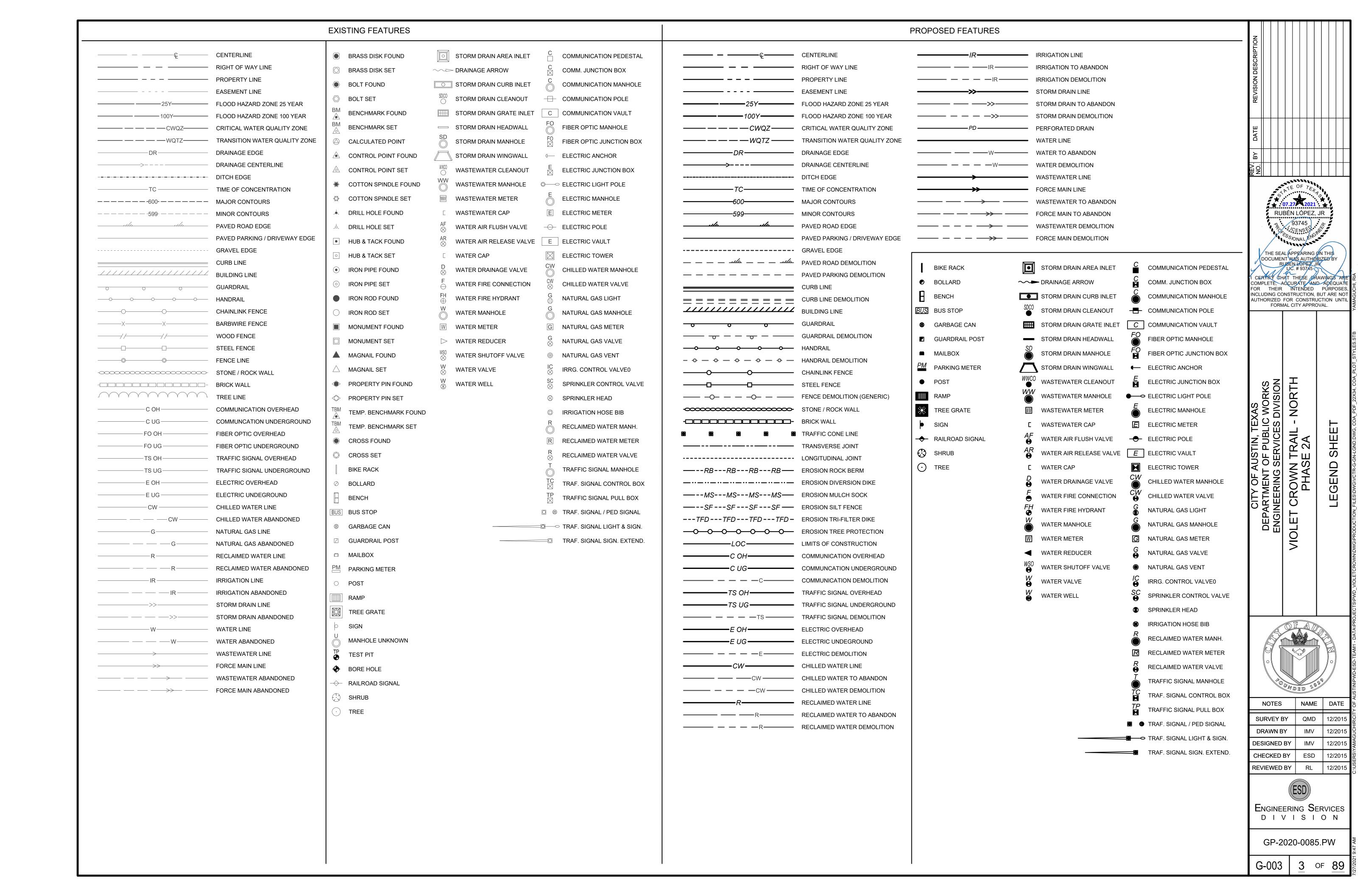
CONTACT: RUBEN LOPEZ, P.E. PHONE: (512) 974-7159 EMAIL: ruben.lopez@austintexas.gov

GP-2020-0000.PWD ANNUAL GENERAL PERMIT NUMBER REVIEWED BY: [NUMBER] CITY OF AUSTIN PARKS AND RECREATION MOU NUMBER CITY OF SUNSET VALLEY RECOMMENDED FOR LETTING DOCUMENT OF SUNSET VALLEY RECOMMENDED FOR LETTING T/21/2021 DISTRICT DESIGN ENGINEER, TEXAS DEPARTMENT OF TRANSPORTATION CORRECT FOR LETTING DOCUMENT OF TRANSPORTATION DATE APPROVE FOR LETTING DOCUMENT OF TRANSPORTATION DATE APPROVE FOR LETTING DOCUMENT OF TRANSPORTATION DATE T/21/2021 APPROVE FOR LETTING	APPROVED BY GENERAL PERMIT HOLD)ER:
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APPROVAL FOR SITE DEVELOPMENT PERMIT: GP-2020-0085.PW 7/21/2021 DATE TOTAL PROPERMIT: GP-2020-0085.PW		
APPROVE FOR LETTING 7/21/2021 DIRECTOR OF TRANSPORTATION PLANNING & DEVELOPMENT, TEXAS DEPARTMENT OF TRANSPORTATION APPROVAL FOR SITE DEVELOPMENT PERMIT: GENERAL PERMIT PROGRAM COORDINATOR DEVELOPMENT SERVICES DEPARTMENT GP-2020-0085.PW	William L Senora Jr, P.E.	7/21/2021 DATE
DIRECTOR OF TRANSPORTATION PLANNING & DEVELOPMENT, TEXAS DEPARTMENT OF TRANSPORTATION APPROVAL FOR SITE DEVELOPMENT PERMIT: GENERAL PERMIT PROGRAM COORDINATOR DEVELOPMENT SERVICES DEPARTMENT GP-2020-0085.PW		
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GP-2020-0085.PW		ERMIT:
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# ID DESCRIPTION 1 G-001 GENERAL COVER	70 L-108 TREE MITIGATION - SHEET 8 OF 9	■
I G-001 GENERAL COVER	71 I 100 TREE MITICATION SHEET 0 OF 0	
O OOO INDEVICUEET	71 L-109 TREE MITIGATION - SHEET 9 OF 9	
2 G-002 INDEX SHEET	72 L-110 TREE MITIGATION LIST	
3 G-003 LEGEND SHEET	73 L-001 LANDSCAPE AND IRRIGATION NOTES	
4 G-004 GENERAL CONSTRUCTION NOTES	74 L-002 LANDSCAPE PLANT LIST	
5 CU001 GENERAL INFORMATION & CONSTRUCTION NOTES FOR CAPITAL IMPROVEMENTS PROJECTS	75 L-501 LANDCAPE DETAILS	
6 G-101 OVERALL MAP	76 S-101 EROSION HAZARD ZONE WORK MAP (OVERALL)	
7 V-101 EXISTING CONDITIONS PLAN - SHEET 1 OF 7	77 S-102 EHZ ANALYSIS POINT 1	
8 V-102 EXISTING CONDITIONS PLAN - SHEET 2 OF 7	78 S-103 EHZ ANALYSIS POINT 2	
9 V-103 EXISTING CONDITIONS PLAN - SHEET 3 OF 7	79 S-104 EHZ ANALYSIS POINT 3	
10 V-104 EXISTING CONDITIONS PLAN - SHEET 4 OF 7	80 P-501 PRECAST CONCRETE BOARDWALK - SHEET 1 OF 6	
11 V-105 EXISTING CONDITIONS PLAN - SHEET 5 OF 7	81 P-502 PRECAST CONCRETE BOARDWALK - SHEET 2 OF 6	
12 V-106 EXISTING CONDITIONS PLAN - SHEET 6 OF 7	82 P-503 PRECAST CONCRETE BOARDWALK - SHEET 3 OF 6	

13 V-107 EXISTING CONDITIONS PLAN - SHEET 7 OF 7	83 P-504 PRECAST CONCRETE BOARDWALK - SHEET 4 OF 6	07.29 2021 : ★
14 CE-001 EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS	84 P-505 PRECAST CONCRETE BOARDWALK - SHEET 5 OF 6	★ :07.29 2021 ★
15 CE-002 TREE PROTECTION NOTES AND DETAILS	85 P-506 PRECAST CONCRETE BOARDWALK - SHEET 6 OF 6	RUBÉN LÓPEZ, JR
16 CE-003 EXISTING PEDESTRIAN PATH REVEGETATION AREA	86 TXD1 ENVIRONMENTAL PERMITS AND COMMITMENTS - EPIC (SHEET 1 OF 2)	93745
17 CE-101 EROSION & SEDIMENTATION CONTROL - SHEET 1 OF 7	87 TXD2 ENVIRONMENTAL PERMITS AND COMMITMENTS - EPIC (SHEET 2 OF 2)	93745 OCICENSED AND SONAL ENGRAPE
18 CE-102 EROSION & SEDIMENTATION CONTROL - SHEET 2 OF 7	88 TXD3 PREP ROW PRUNING DETAIL	
19 CE-103 EROSION & SEDIMENTATION CONTROL - SHEET 3 OF 7	89 TXD4 VOID MITIGATION DETAILS	THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY
20 CE-104 EROSION & SEDIMENTATION CONTROL - SHEET 4 OF 7		DOCUMENT WAS AUTHORIZED BY RUBEN COPEZ, JR LIC. # 93745 I CERNEY THAT THESE DRAWINGS AR
21 CE-105 EROSION & SEDIMENTATION CONTROL - SHEET 5 OF 7		I CERNEY THAT THESE PRAWINGS AF
22 CE-106 EROSION & SEDIMENTATION CONTROL - SHEET 6 OF 7		COMPLETE, ACCURATE AND ADEQUATE FOR THEIR INTENDED PURPOSE INCLUDING CONSTRUCTION, BUT ARE NO AUTHORIZED FOR CONSTRUCTION UNT
		AUTHORIZED FOR CONSTRUCTION UNT
23 CE-107 EROSION & SEDIMENTATION CONTROL - SHEET 7 OF 7		TOTAL OTT ATTROVAL.
24 CE-601 EROSION & SEDIMENTATION CONTROL - TREE LIST SHEET 1 OF 2		
25 CE-602 EROSION & SEDIMENTATION CONTROL - TREE LIST SHEET 2 OF 2		
26 CP-201 MAIN TRAIL PLAN & PROFILE BEGIN - STA. 11+50		
27 CP-202 MAIN TRAIL PLAN & PROFILE STA. 11+50 - STA. 15+50		
28 CP-203 MAIN TRAIL PLAN & PROFILE STA. 15+50 - STA. 19+50		
29 CP-204 MAIN TRAIL PLAN & PROFILE STA. 19+50 - STA. 23+50		
30 CP-205 MAIN TRAIL PLAN & PROFILE STA. 23+50 - STA. 27+50		STIN, TEXAS FUBLIC WORKS RVICES DIVISION TRAIL - NORTH
31 CP-206 MAIN TRAIL PLAN & PROFILE STA. 27+50 - STA. 31+50		
32 CP-207 MAIN TRAIL PLAN & PROFILE STA. 31+50 - STA. 35+50		
33 CP-208 MAIN TRAIL PLAN & PROFILE STA. 35+50 - STA. 39+50		
34 CP-209 MAIN TRAIL PLAN & PROFILE STA. 39+50 - STA. 43+50		
35 CP-210 MAIN TRAIL PLAN & PROFILE STA. 43+50 - STA. 47+50		
36 CP-211 MAIN TRAIL PLAN & PROFILE STA. 47+50 TO END		A A SE
37 CP-212 SPUR TRAIL LATERAL PLAN & PROFILE BEGIN - STA. 13+00		
38 CP-213 SPUR TRAIL LATERAL PLAN & PROFILE STA. 13+00 - STA. 17+00		
39 CP-214 SPUR TRAIL LATERAL PLAN & PROFILE STA. 17+00 - STA. 21+00		
40 CP-215 SPUR TRAIL LATERAL PLAN & PROFILE STA. 21+00 - END		E PART CIT
41 CP-001 DETAIL SHEETS (SHEET 1 OF 3)		
42 CP-002 DETAIL SHEETS (SHEET 2 OF 3)		19 le
43 CP-003 DETAIL SHEETS (SHEET 3 OF 3)		
44 CP-004 PEDESTRAIN HANDRAIL DETAILS (SHEET 1 OF 3)		
45 CP-005 PEDESTRAIN HANDRAIL DETAILS (SHEET 2 OF 3)		
46 CP-006 PEDESTRAIN HANDRAIL DETAILS (SHEET 3 OF 3)		
47 CP-007 WILLIAMSON CREEK CROSSING SECTION A AND D		
48 CP-008 WILLAIMSON CREEK CROSSING SECTION B AND C		
49 CM-101 MAIN TRAIL STRIPING AND SIGNAGE PLAN - SHEET 1 OF 3		——————————————————————————————————————
50 CM-102 MAIN TRAIL STRIPING AND SIGNAGE PLAN - SHEET 2 OF 3		
51 CM-103 MAIN TRAIL STRIPING AND SIGNAGE PLAN - SHEET 3 OF 3		
52 CM-104 SPUR TRAIL STRIPING AND SIGNAGE PLAN		
53 CM-501 STRIPING AND SIGNAGE DETAIL		
54 CD-101 DRAINAGE AREA MAP - SOUTH 1 OF 2		UNDED 18°
55 CD-102 DRAINAGE AREA MAP - SOUTH 2 OF 2		NOTES NAME DATE
56 CD-103 DRAINAGE AREA MAP - NORTH		
57 CD-601 DRAINAGE AREA CALCULATIONS - SOUTH 1 & 2		SURVEY BY QMD 12/2019
58 CD-602 DRAINAGE AREA CALCULATIONS - NORTH 1		DRAWN BY IMV 12/201
59 CT-001 TRAFFIC CONTROL NOTES		DESIGNED BY IMV 12/201
60 CT-101 TRAFFIC CONTROL PLAN - SHEET 1 OF 2		CHECKED BY ESD 12/201
61 CT-102 TRAFFIC CONTROL PLAN - SHEET 2 OF 2		REVIEWED BY RL 12/201
62 CT-501 TRAFFIC CONTROL DETAILS		ESD
63 L-101 TREE MITIGATION - SHEET 1 OF 9		
64 L-102 TREE MITIGATION - SHEET 2 OF 9		Engineering Services
65 L-103 TREE MITIGATION - SHEET 3 OF 9		DIVISION
66 L-104 TREE MITIGATION - SHEET 4 OF 9		
67 L-105 TREE MITIGATION - SHEET 5 OF 9		GP-2020-0085.PW
68 L-106 TREE MITIGATION - SHEET 6 OF 9		G-002 2 OF 89



CITY OF AUSTIN PUBLIC WORKS DEPARTMENT ENGINEERING SERVICES DIVISION

GENERAL CONSTRUCTION NOTES:

- 1. THE PROJECT MANUAL CONTAINS IMPORTANT INFORMATION THAT IS NOT REPEATED. IN THE PLAN SET. THE CONTRACTOR SHALL KEEP THE PROJECT MANUAL ON SITE AND IMMEDIATELY AVAILABLE TO THOSE PERSONS PERFORMING THE WORK. UPON REQUEST, THE CONTRACTOR SHALL PRESENT THIS COPY OF THE PROJECT MANUAL TO THE CONSTRUCTION INSPECTOR, ENGINEER OR PROJECT MANAGER.
- 2. THE CONTRACTOR WILL NOTIFY THE OWNER'S REPRESENTATIVE FORTY-EIGHT (48) HOURS IN ADVANCE OF BEGINNING ANY CONSTRUCTION IN THE RIGHT OF WAY OR EASEMENTS.
- CONTRACTOR AND SUB-CONTRACTORS MUST BE LICENSED BY THE CITY OF AUSTIN FOR CONDUCTING WORK WITHIN THE STREET RIGHT OF WAY, ALLEYS, OR EASEMENTS.
- CONTRACTOR MUST OBTAIN RIGHT OF WAY EXCAVATION PERMITS, FOR EACH PROJECT LOCATION, FROM ROW MANAGEMENT DIVISION (512-974-7180) PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR SHALL PROVIDE A ONE CALL CENTER CONFIRMATION NUMBER BEFORE BEING ISSUED AN EXCAVATION PERMIT. "ONE CALL" PHONE NUMBER: 811.
- PRE-CONSTRUCTION MEETINGS: THERE ARE TWO ENTITIES THAT HOLD PRE-CONSTRUCTION MEETINGS. THESE MEETINGS TYPICALLY DO NOT OCCUR AT THE SAME TIME. FOR PRE-CONSTRUCTION MEETING HELD BY CONSTRUCTION INSPECTION DIVISION. SEE PROJECT MANUAL SECTION 01200: FOR ENVIRONMENTAL PRE-CONSTRUCTION MEETING, SEE ENVIRONMENTAL NOTES.
- THE CONTRACTOR SHALL NOTIFY EACH OF THE FOLLOWING ENTITIES OF THE CONSTRUCTION SCHEDULE AT LEAST TWO WEEKS IN ADVANCE OF PROPOSED CONSTRUCTION OPERATIONS AND PROVIDE PERTINENT INFORMATION ABOUT LANE CLOSURES AND DETOURS.

AUSTIN FIRE DEPARTMENT	512-974-0130
AUSTIN POLICE DEPARTMENT	512-974-5000
EMERGENCY MEDICAL SERVICES	512-978-0440
AUSTIN INDEPENDENT SCHOOL DISTRICT	512-414-9832
CAPITAL METRO TRANSIT AUTHORITY	512-389-7400
U.S. POSTAL SERVICE	512-342-1236
UNIVERSITY OF TEXAS	
(Facilities Services)	512-471-4110
(Parking and Trans)	512-471-7275
(Utilities and Energy Mgmt)	512-471-1600
(University Police)	512-471-4441
(Project Mgmt & Const. Svcs)	512-471-3042
STATE OF TEXAS	
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DPS TEXAS HWY PATROL (Region 7 Austin Capitol).....

- 7. THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING TYPE AND LOCATION OF SURFACE, SUBSURFACE, AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT TYPE AND LOCATION OF ALL UTILITIES AFFECTED BY THE CONSTRUCTION IN ORDER TO AVOID DAMAGING THOSE UTILITIES.
- THE CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTORS AND UTILITIES IN THE VICINITY OF THIS PROJECT. THIS INCLUDES, BUT IS NOT LIMITED TO, GAS, WATER, WASTEWATER ELECTRIC, TELEPHONE, CABLE TELEVISION, PETROLEUM PIPELINES, FIBER OPTIC, STREET, DRAINAGE, AND ANY OTHER WORK OCCURRING IN OR NEAR THE PROJECT SITE. ONCE THE CONTRACTOR BECOMES AWARE OF A POSSIBLE CONFLICT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY, BUT NO LATER THAN TWENTY-FOUR (24) HOURS AFTER DISCOVERY.
- SHOULD THE CONTRACTOR DAMAGE A UTILITY DURING THE COURSE OF THE WORK, THE CONTRACTOR SHALL IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF THE DAMAGED UTILITY. THE EXPENSE FOR THESE REPAIRS WILL BE AT THE CONTRACTOR'S SOLE EXPENSE.
- 10. ALL EXISTING STRUCTURES, FACILITIES, AND UTILITIES DAMAGED BY CONSTRUCTION SHALL BE REMOVED AND RESTORED WITH MATERIALS EQUAL TO OR BETTER THAN THE ORIGINAL AND TO CONDITIONS EQUAL TO OR BETTER THAN THE ORIGINAL. UNLESS OTHERWISE NOTED IN THE PLANS, THIS WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT SHALL BE AT THE CONTRACTOR'S SOLE EXPENSE.
- 11. SLOPES OF ROADWAY CUTS AND EMBANKMENTS DAMAGED BY ANY OPERATION OF THE CONTRACTOR DURING THE EXECUTION OF THIS PROJECT SHALL BE REPAIRED AND RESTORED TO THE ORIGINAL PRE-CONSTRUCTION CONDITION. BACKFILL AND FILL PLACED DURING REMEDIAL GRADING SHALL BE COMPACTED TO AT LEAST 95% COMPACTION AND TO THE SATISFACTION OF THE ENGINEER AND GOVERNING AUTHORITIES.
- 12. GEOTECHNICAL INFORMATION IS PROVIDED IN THE PROJECT MANUAL SECTION 00220.
- 13. SEE PROJECT MANUAL SECTION 01300 FOR RECORD DRAWINGS INFORMATION

STREET AND BRIDGE SPECIAL NOTE:

ALL DAMAGE CAUSED DIRECTLY OR INDIRECTLY TO THE STREET SURFACE, SIDEWALK, DRIVEWAY, CURB & GUTTER, OR SUBSURFACE OUTSIDE OF THE PAVEMENT CUT AREA SHALL BE REGARDED AS A PART OF THE STREET CUT REPAIR. THIS INCLUDES ANY SCRAPES, GOUGES, CUTS, CRACKING, DEPRESSIONS, AND/OR ANY OTHER DAMAGE CAUSED BY THE CONTRACTOR DURING THE EXECUTION OF THE WORK. THESE REPAIR AREAS WILL BE INCLUDED IN THE TOTAL AREA OF RESTORATION. THESE AREAS SHALL BE SAW CUT IN STRAIGHT, NEAT LINES PARALLEL TO THE EXCAVATION OR UTILITY TRENCH AND TO THE NEXT EXISTING JOINT FOR SIDEWALKS AND CURB & GUTTER. ALL SUCH REPAIRS SHALL BE AT THE CONTRACTOR'S EXPENSE AND SHALL MEET ALL CITY TESTING REQUIREMENTS, STANDARDS, AND SPECIFICATIONS.

SEQUENCE OF CONSTRUCTION

- 1. SEE REMEDIAL TREE CARE NOTE (ECM P-6).
- 2. HOLD PRE-CONSTRUCTION CONFERENCE
- TEMPORARY EROSION AND SEDIMENTATION CONTROLS ARE TO BE INSTALLED AS INDICATED ON THE APPROVED SITE PLAN OR SUBDIVISION CONSTRUCTION PLAN AND IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) THAT IS REQUIRED TO BE POSTED ON THE SITE. INSTALL TREE PROTECTION AND INITIATE TREE MITIGATION MEASURES.
- THE ENVIRONMENTAL PROJECT MANAGER OR SITE SUPERVISOR MUST CONTACT THE WATERSHED PROTECTION DEPARTMENT, ENVIRONMENTAL INSPECTION, AT 512-974-2278, 72 HOURS PRIOR TO THE SCHEDULED DATE OF THE REQUIRED ON-SITE PRECONSTRUCTION MEETING.
- THE ENVIRONMENTAL PROJECT MANAGER, AND/OR SITE SUPERVISOR, AND/OR DESIGNATED RESPONSIBLE PARTY, AND THE GENERAL CONTRACTOR WILL FOLLOW THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) POSTED ON THE SITE. TEMPORARY EROSION AND SEDIMENTATION CONTROLS WILL BE REVISED, IF NEEDED, TO COMPLY WITH CITY INSPECTORS' DIRECTIVES, AND REVISED CONSTRUCTION SCHEDULE RELATIVE TO THE WATER QUALITY PLAN REQUIREMENTS AND THE EROSION PLAN.
- 6. ROUGH GRADE THE POND(S) AT 100% PROPOSED CAPACITY. EITHER THE PERMANENT OUTLET STRUCTURE OR A TEMPORARY OUTLET MUST BE CONSTRUCTED PRIOR TO DEVELOPMENT OF EMBANKMENT OR EXCAVATION THAT LEADS TO PONDING CONDITIONS. THE OUTLET SYSTEM MUST CONSIST OF A SUMP PIT OUTLET AND AN EMERGENCY SPILLWAY MEETING THE REQUIREMENTS OF THE DRAINAGE CRITERIA MANUAL AND/OR THE ENVIRONMENTAL CRITERIA MANUAL, AS REQUIRED. THE OUTLET SYSTEM SHALL BE PROTECTED FROM EROSION AND SHALL BE MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION UNTIL INSTALLATION OF THE PERMANENT WATER QUALITY POND(S).
- 7. TEMPORARY EROSION AND SEDIMENTATION CONTROLS WILL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) POSTED ON THE SITE.
- 8. BEGIN SITE CLEARING/CONSTRUCTION (OR DEMOLITION) ACTIVITIES.
- PERMANENT WATER QUALITY PONDS OR CONTROLS WILL BE CLEANED OUT AND FILTER MEDIA WILL BE INSTALLED PRIOR TO/CONCURRENTLY WITH REVEGETATION OF SITE.
- 10. COMPLETE CONSTRUCTION AND START REVEGETATION OF THE SITE AND INSTALLATION OF LANDSCAPING.
- 11. UPON COMPLETION OF THE SITE CONSTRUCTION AND REVEGETATION OF A PROJECT SITE, THE DESIGN ENGINEER SHALL SUBMIT AN ENGINEER'S LETTER OF CONCURRENCE TO THE WATERSHED PROTECTION AND DEVELOPMENT REVIEW DEPARTMENT INDICATING THAT CONSTRUCTION. INCLUDING REVEGETATION. IS COMPLETE AND IN SUBSTANTIAL CONFORMITY WITH THE APPROVED PLANS. AFTER RECEIVING THIS LETTER, A FINAL INSPECTION WILL BE SCHEDULED BY THE APPROPRIATE CITY
- 12. UPON COMPLETION OF LANDSCAPE INSTALLATION OF A PROJECT SITE, THE LANDSCAPE ARCHITECT SHALL SUBMIT A LETTER OF CONCURRENCE TO THE WATERSHED PROTECTION AND DEVELOPMENT REVIEW DEPARTMENT INDICATING THAT THE REQUIRED LANDSCAPING IS COMPLETE AND IN SUBSTANTIAL CONFORMITY WITH THE APPROVED PLANS, AFTER RECEIVING THIS LETTER, A FINAL INSPECTION WILL BE SCHEDULED BY THE APPROPRIATE CITY INSPECTOR.
- 13. AFTER A FINAL INSPECTION HAS BEEN CONDUCTED BY THE CITY INSPECTOR AND WITH APPROVAL FROM THE CITY INSPECTOR, REMOVE THE TEMPORARY EROSION AND SEDIMENTATION CONTROLS AND COMPLETE ANY NECESSARY FINAL REVEGETATION RESULTING FROM REMOVAL OF THE CONTROLS. CONDUCT ANY MAINTENANCE AND REHABILITATION OF THE WATER QUALITY PONDS OR CONTROLS.
- 14. COMPLETE PERMANENT EROSION CONTROL AND SITE RESTORATION. REMOVE TEMPORARY EROSION/SEDIMENTATION CONTROLS AND TREE PROTECTION. RESTORE ANY AREAS DISTURBED DURING REMOVAL OF EROSION/SEDIMENTATION CONTROLS.

EXCEPTIONS TABLE

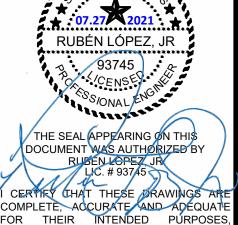
NOTE#	EXPLANATION OF EXCEPTION

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY WATER POLLUTION ABATEMENT PLAN GENERAL CONSTRUCTION NOTES

- 1. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE:
 - THE NAME OF THE APPROVED PROJECT;
 - THE ACTIVITY START DATE; AND
 - THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.
- 2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED WATER POLLUTION ABATEMENT PLAN (WPAP) AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS ARE REQUIRED TO KEEP ON-SITE COPIES OF THE APPROVED PLAN AND APPROVAL LETTER.
- 3. IF ANY SENSITIVE FEATURE(S) (CAVES, SOLUTION CAVITY, SINK HOLE, ETC.) IS DISCOVERED DURING CONSTRUCTION, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPROPRIATE TCEQ REGIONAL OFFICE MUST BE IMMEDIATELY NOTIFIED OF ANY SENSITIVE FEATURES ENCOUNTERED DURING CONSTRUCTION. CONSTRUCTION ACTIVITIES MAY NOT BE RESUMED UNTIL THE TCEQ HAS REVIEWED AND APPROVED THE APPROPRIATE PROTECTIVE MEASURES IN ORDER TO PROTECT ANY SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY.
- 4. NO TEMPORARY OR PERMANENT HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE.
- 5. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND MANUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
- 6. ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF BEFORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS, SENSITIVE FEATURES, ETC.
- 7. SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS NOT LATER THAN WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.
- 8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.
- 9. ALL SPOILS (EXCAVATED MATERIAL) GENERATED FROM THE PROJECT SITE MUST BE STORED ON-SITE WITH PROPER E&S CONTROLS. FOR STORAGE OR DISPOSAL OF SPOILS AT ANOTHER SITE ON THE EDWARDS AQUIFER RECHARGE ZONE. THE OWNER OF THE SITE MUST RECEIVE APPROVAL OF A WATER POLLUTION ABATEMENT PLAN FOR THE PLACEMENT OF FILL MATERIAL OR MASS GRADING PRIOR TO THE PLACEMENT OF SPOILS AT THE OTHER
- 10. IF PORTIONS OF THE SITE WILL HAVE A TEMPORARY OR PERMANENT CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS. SOIL STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.
- 11. THE FOLLOWING RECORDS SHALL BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ **UPON REQUEST:**
 - THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR: - THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY
 - CEASE ON A PORTION
 - OF THE SITE: AND
 - THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
- 12. THE HOLDER OF ANY APPROVED EDWARD AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
- A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY WATER POLLUTION ABATEMENT STRUCTURE(S), INCLUDING BUT NOT LIMITED TO PONDS, DAMS, BERMS, SEWAGE TREATMENT PLANTS, AND DIVERSIONARY STRUCTURES;
- B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED OR A CHANGE WHICH WOULD SIGNIFICANTLY IMPACT THE ABILITY OF THE PLAN TO PREVENT POLLUTION OF THE EDWARDS AQUIFER;
- C. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.

AUSTIN REGIONAL OFFICE 12100 PARK 35 CIRCLE, BUILDING A 14250 JUDSON ROAD **AUSTIN, TEXAS 78753-1808** PHONE (512) 339 - 2929 FAX (512) 339 - 3795

SAN ANTONIO REGIONAL OFFICE SAN ANTONIO, TEXAS 78233-4480 PHONE (210) 490 - 3096 FAX (210) 545 - 4329



INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL FORMAL CITY APPROVAL.

> NOR **→** W



NOTES	NAME	DATE
SURVEY BY	QMD	12/2015
DRAWN BY	IMV	12/2015
DESIGNED BY	IMV	12/2015
CHECKED BY	ESD	12/2015
REVIEWED BY	RL	12/2015



Engineering Services DIVISION

GP-2020-0085.PW

OF 89

AUSTIN WATER GENERAL CONSTRUCTION NOTES (11/23/2017):

- 1. THE CITY STANDARD CONSTRUCTION SPECIFICATIONS CURRENT AT THE TIME OF BIDDING SHALL COVER MATERIALS AND METHODS USED TO DO THIS WORK.
- 2. CONTRACTOR MUST OBTAIN A STREET CUT PERMIT FROM AUSTIN TRANSPORTATION DEPARTMENT, RIGHT OF WAY MANAGEMENT DIVISION BEFORE BEGINNING CONSTRUCTION WITHIN THE RIGHT-OF-WAY OF A PUBLIC STREET OR ALLEY.
- 3. AT LEAST 48 HOURS BEFORE BEGINNING ANY WATER AND WASTEWATER CONSTRUCTION IN PUBLIC R.O.W. OR PUBLIC EASEMENT, THE CONTRACTOR SHALL NOTIFY AUSTIN TRANSPORTATION DEPARTMENT INSPECTION OR DEVELOPMENT SERVICES DEPARTMENT (DSD) INSPECTIONS AT THE NUMBER INDICATED ON THE PLANS BY THE AW PLAN REVIEWER.
- 4. THE CONTRACTOR SHALL CONTACT THE AUSTIN AREA "ONE CALL" SYSTEM AT 1-800-344-8377 FOR EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION IN ADVANCE OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES TO BE EXTENDED, TIED TO, OR ALTERED, OR SUBJECT TO DAMAGE / INCONVENIENCE BY THE CONSTRUCTION OPERATIONS. THE CITY OF AUSTIN WATER AND WASTEWATER MAINTENANCE RESPONSIBILITY ENDS AT R.O.W./EASEMENT LINES.
- NO OTHER UTILITY SERVICE / APPURTENANCES SHALL BE PLACED NEAR THE PROPERTY LINE, OR OTHER ASSIGNED LOCATION DESIGNATED FOR WATER AND WASTEWATER UTILITY SERVICE THAT WOULD INTERFERE WITH THE WATER AND WASTEWATER SERVICES.
- 6. THE CITY SPECIFICATION ITEM 509S WILL BE REQUIRED AS A MINIMUM TRENCH SAFETY
- ALL MATERIALS TESTS ORDERED BY THE OWNER FOR QUALITY ASSURANCE PURPOSES, SHALL BE CONDUCTED BY AN INDEPENDENT LABORATORY AND FUNDED BY THE OWNER IN ACCORDANCE WITH CITY STANDARD SPECIFICATION ITEM 1804S.04.
- PRESSURE TAPS SHALL BE ALLOWED ON A CASE BY CASE BASIS, AS DETERMINED BY THE DIRECTOR'S DESIGNEE. NORMAL PRESSURE TAPS 4 INCHES AND LARGER SHALL BE ALLOWED IN THE FOLLOWING CASES: A) A TEST SHUT OUT INDICATES AN ADEQUATE SHUTOUT TO PERFORM THE WORK IS NOT FEASIBLE B) MORE THAN 30 CUSTOMERS OR A SINGLE CRITICAL CUSTOMER (AS DEFINED BY AUSTIN WATER) WOULD BE IMPACTED BY THE SHUT OUT OR C) THE EXISTING WATER LINE WARRANTS IT.
- 9. THRUST RESTRAINT SHALL BE IN ACCORDANCE WITH CITY STANDARD SPECIFICATION ITEM 510.3(22) AND SPL WW 27-A AND WW 27-F.
- 10. FIRE HYDRANTS SHALL BE SET IN ACCORDANCE WITH CITY STANDARD SPECIFICATION ITEM 511S.4 AND SHALL BE PAINTED FLYNT ALUMINUM OR EQUAL. FIRE HYDRANTS AND ASSOCIATED VALVES, TEN (10) YEARS OR OLDER WILL BE REQUIRED TO BE REPLACED WITH A NEW FIRE HYDRANT AND APPURTENANCES.
- 11. WATER LINE TESTING AND STERILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH CITY STANDARD SPECIFICATION ITEMS 510.3 (27)-(29). FORCE MAIN PRESSURE TESTING SHALL BE CONDUCTED AND FALL UNDER THE SPECIFICATIONS AS WATER LINES (PRESSURE PIPE) OR AT THE PRESSURES SHOWN ON THE APPROVED PLANS.
- 12. ALL MATERIAL USED ON THIS PROJECT MUST BE LISTED ON THE STANDARD PRODUCTS LISTING. ANY MATERIAL NOT LISTED HAS TO GO THROUGH THE REVIEW OF THE STANDARDS COMMITTEE FOR REVIEW AND APPROVAL PRIOR TO START OF PROJECT. TESTING AND EVALUATION OF PRODUCTS ARE REQUIRED BEFORE APPROVAL WILL BE GIVEN ANY CONSIDERATION.
- 13. WHEN WATER SERVICES ARE DAMAGED AND THE SERVICE MATERIAL IS PE, THE LINE SHALL BE REPAIRED ONLY BY HEAT FUSION WELD OR REPLACED THE FULL LENGTH WITH TYPE K COPPER MATERIAL. ANY TIME PB IS DAMAGED OR TAMPERED WITH IN ANY WAY. THE SERVICE LINE SHALL BE REPLACED FULL LENGTH WITH TYPE K COPPER MATERIAL. NOTE: FULL LENGTH IS FROM CORPORATION STOP TO METER.
- 14. WHEN AN EXISTING WATERLINE SHUT OUT IS NECESSARY AND POSSIBLE, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTOR WHO WILL THEN NOTIFY THE AUSTIN WATER DISPATCH AND THE AFFECTED CUSTOMERS A MINIMUM OF SEVENTY-TWO (72) HOURS IN ADVANCE.
- 15. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTOR SO THAT HE CAN NOTIFY THE AUSTIN WATER AT 972-0000 AT A MINIMUM OF 72 HOURS PRIOR TO RELOCATING ANY DOMESTIC OR FIRE DEMAND WATER METERS. THE CONTRACTOR SHALL CAREFULLY REMOVE ALL METERS AND METERS BOXES THAT ARE INDICATED TO BE RELOCATED OR SALVAGED. THE CONTRACTOR SHALL INSTALL THE REMOVED METER OR CITY PROVIDED METER AT THE NEW LOCATION INDICATED ON THE CONSTRUCTION
- 16. WATER AND WASTE WATER SERVICES WILL NEED TO BE REPLACED UP TO THE MAIN. REPAIR COUPLINGS ARE NOT ALLOWED ON NEW INSTALLATIONS.
- 17. ALL MANHOLES IN UNPAVED AREAS PROVIDING DIRECT ACCESS TO A WASTEWATER LINE SHALL BE WATERTIGHT AND BEAR THE WORDING AND INSIGNIA FOR THE CITY OF
- 18. THE CONTRACTOR SHALL VERIFY ALL VERTICAL AND HORIZONTAL LOCATIONS OF EXISTING UTILITIES PRIOR TO STARTING ON-SITE UTILITY WORK.
- 19. ALL WATER AND WASTEWATER MAINS SHALL BE INSTALLED IN ACCORDANCE WITH THE SEPARATION DISTANCES INDICATED IN CHAPTER 290 - DRINKING WATER STANDARDS, CHAPTER 217 - DESIGN CRITERIA FOR SEWERAGE SYSTEMS AND CHAPTER 210 - DESIGN CRITERIA FOR RECLAIMED SYSTEMS OF TCEQ RULES.
- 20. CONTRACTOR'S PERSONNEL THAT PERFORM BUTT FUSION AND ELECTROFUSION ON OR TO HDPE PIPE AND FITTINGS MUST HAVE CURRENT QUALIFICATION TRAINING CERTIFICATE ISSUED BY MCELROY OR COMPARABLE TRAINING PROGRAM.
- 21. SHOP DRAWINGS SIGNED AND SEALED BY A PROFESSIONAL STRUCTURAL ENGINEER, REGISTERED IN THE STATES OF TEXAS, SHALL BE SUBMITTED FOR AUSTIN WATER APPROVAL FOR LARGE DIAMETER PRE-CAST MANHOLES, JUNCTION BOXES, WET WELLS, AND SIMILAR STRUCTURES. THE SHOP DRAWINGS SHALL INCLUDE FLOWLINE ELEVATIONS OF ALL INCOMING AND OUTGOING PIPES, ELEVATION OF TRANSITION FROM LARGE DIAMETER SECTION TO 48" ID SECTION, TOP OF MANHOLE ELEVATION, SURROUNDING GROUND ELEVATION, AS WELL AS SPECIAL CONSTRUCTION CONSIDERATIONS THAT ARE SPECIFIED IN CONTRACT DRAWINGS.
- 22. VALVE STEM EXTENSIONS SHALL CONSIST OF A SINGLE PIECE OF IRON ROD OF THE REQUIRED LENGTH WITH A SOCKET ON ONE END AND NUT ON THE OTHER.
- 23. ALL POTABLE WATER SYSTEM COMPONENTS INSTALLED AFTER JANUARY 4, 2014, SHALL BE ESSENTIALLY "LEAD FREE" ACCORDING TO THE US SAFE DRINKING WATER ACT. EXAMPLES ARE VALVES (CORPORATION STOP, CURB STOP, AND PRESSURE REDUCING), NIPPLES, BUSHINGS, PIPE, FITTINGS, BACKFLOW PREVENTERS AND FIRE HYDRANTS. TAPPING SADDLES AND 2 INCH AND LARGER GATE VALVES ARE THE ONLY COMPONENTS EXEMPT FROM THIS REQUIREMENT. COMPONENTS THAT ARE NOT CLEARLY IDENTIFIED BY THE MANUFACTURER AS MEETING THIS REQUIREMENT EITHER BY MARKINGS ON THE COMPONENT OR ON THE PACKAGING SHALL NOT BE INSTALLED.

- 24. ALL FIRE HYDRANTS AND VALVES THAT ARE TO BE ABANDONED SHALL BE REMOVED. SALVAGED AND RETURNED TO AUSTIN WATER. NOTICE SHOULD BE GIVEN 48 HOURS PRIOR TO RETURN TO: PIPELINE OPERATIONS DISTRIBUTION SYSTEM MAINTENANCE, VALVES AND HYDRANT SERVICES, SUPERVISING AW PIPELINE TECHNICIAN AT 512-972-1133.
- 25. ALL EXISTING WATER METERS IDENTIFIED TO BE RELOCATED OR ABANDONED AT THE DEVELOPMENT, SHALL BE REMOVED FROM THE METER BOX PRIOR TO CONSTRUCTION AND GIVEN IMMEDIATELY TO THE DSD INSPECTOR.
- 26. THE ENGINEER SHALL CALL OUT THE SIZE, TYPE AND USE (DOMESTIC OR IRRIGATION) OF ALL EXISTING WATER METERS TO BE RELOCATED OR REPURPOSED. WATER METER NUMBERS WILL NOT BE REQUIRED TO BE PLACED ON THE PLAN SHEET. A SEPARATE AUSTIN WATER TAPS OFFICE FORM WILL BE USED TO PROVIDE RELEVANT INFORMATION FOR THE EXISTING INFORMATION ON EXISTING METERS TO RECEIVE APPROPRIATE CREDITS. THIS FORM SHALL BE DIRECTLY SUBMITTED TO AUSTIN WATER TAPS OFFICE FOR REVIEW AND PROCESSING.
- 27. NO CONNECTION MAY BE MADE BETWEEN THE PRIVATE PLUMBING AND AUSTIN WATER INFRASTRUCTURE UNTIL A CITY APPROVED WATER METER HAS BEEN INSTALLED.
- 28. ALL GRAVITY LINES SHALL BE INSTALLED DOWNSTREAM TO UPSTREAM.
- 29. METER BOXES AND CLEAN OUTS SHALL NOT BE LOCATED WITHIN PAVED AREAS SUCH AS DRIVEWAYS AND SIDEWALKS.
- 30. PROTECTED STREET STATUS IS SUBJECT TO CHANGE OVER TIME. IT IS THE OWNER'S RESPONSIBILITY TO CONFIRM THE STREET STATUS PRIOR TO CONSTRUCTION AS PROTECTED STREET STATUS WILL DIRECTLY IMPACT THE CONSTRUCTION COSTS. IR PROTECTED STREETS ARE PROPOSED TO BE DISTURBED, APPROVAL FROM THE STREET AND BRIDGE DIVISION OF THE TRANSPORTATION DEPARTMENT IS REQUIRED.

GENERAL NOTES

ALL RESPONSIBILITY FOR THE ADEQUECY OF THESE PLANS REMAINS WITH THE ENGINEER. APPROVAL OF THESE PLANS BY THE CITY OF AUSTIN DOES NOT REMOVE THESE RESPONSIBILITIES.

REVIEWED BY AUSTIN WATER APPLIES ONLY TO FACILITIES WITHIN PUBLIC STREETS OR PUBLIC UTILITY EASEMENTS. ALL OTHER WATER AND WASTEWATER FACILITIES INSIDE PRIVATE PROPERTY ARE UNDER THE JURISDICATION OF BUILDING INSPECTIONS.

USE OF ELECTRONIC FILES GENERAL DISCLAIMER: USE OF THE ATTACHED FILES IN ANY MANNER INDICATES YOUR ACCEPTANCE OF TERMS AND CONDITIONS AS SET FORTH BELOW. IF YOU DO NOT AGREE TO ALL OF THE TERMS AND CONDITIONS, PLEASE CONTACT AUSTIN WATER PIPELINE ENGINEERING, PROJECT COORDINATOR PRIOR TO USE OF THE REFERENCED INFORMATION. PLEASE BE ADVISED THAT THE ATTACHED FILES ARE IN A FORMAT THAT CAN BE ALTERED BY THE USER. DUE TO THIS FACT, ANY REUSE OF THE DATA WILL BE AT THE USER'S SOLE RISK WITHOUT LIABILITY OR LEGAL EXPOSURE TO THE CITY OF AUSTIN AND USER SHALL INDEMNIFY AND HOLD HARMLESS THE CITY OF AUSTIN FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING FROM USING THE DIGITAL FILE. IN ADDITION, IT IS THE RESPONSIBILITY OF THE USER TO COMPARE ALL DATA WITH THE PDF VERSION OF THIS DRAWING. IN THE EVENT THERE IS A CONFLICT BETWEEN THE PDF VERSION DRAWING AND THE ELECTRONIC FILE, THE PDF VERSION DRAWING SHALL PREVAIL.

INSPECTION NOTES

PLEASE CONTACT CID INSPECTIONS FOR ARRANGEMENTS FOR PAYMENT OF INSPECTION FEES AND JOB ASSIGNMENT FOR INSPECTION OF THE PUBLIC UTILITIES TO THIS SITE. INSPECTION FEES MUST BE PAID BEFORE ANY PRE-CONSTRUCTION MEETING CAN BE HELD.

DOES THIS PROJECT NEED AULCC REVIEW?

IF YES, PLEASE PROVIDE UCC-140529-05-02

NOTE: IF THE PROJECT IS LOCATED WITHIN FULL PURPOSE JURISDICTION. A RIGHT-OF-WAY REVIEW, THROUGH THE

AULCC PERMIT PROCESS WILL BE REQUIRED.

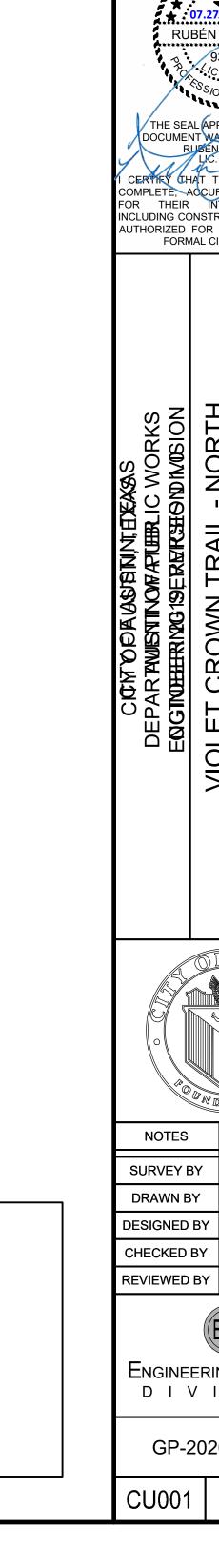
PROJECT INFORMATION

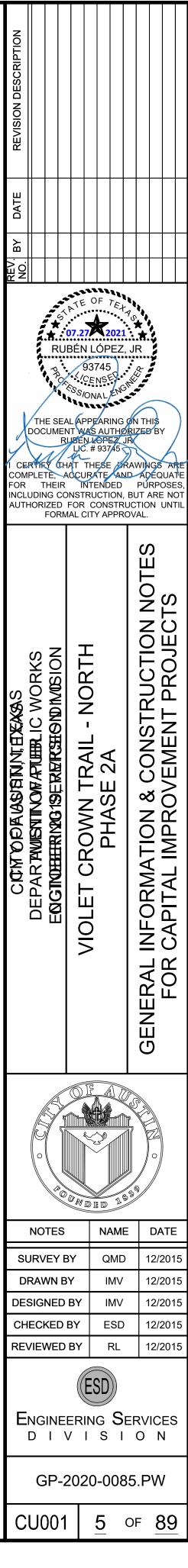
AW IN	FRASTRUCTURE INFO	ORMATION	
PROPOSED PRODUCT TYPE (TO BE INSTALLED)	LENGTH OF PIPE (L.F.)	SIZE OF PIPE (INCH)	NO. OF SERVICES
WATER MAIN			NA
WASTEWATER MAIN			NA
RECLAIMED WATER MAIN			NA
WATER SERVICE	NA	NA	
WASTEWATER SERVICE	NA	NA	
RECLAIMED WATER SERVICE	NA	NA	

EXPAND OR REDUCE TABLE AS NEEDED*

THE INFORMATION INCLUDED IN THIS TABLE ARE APPROXIMATE VALUES ESTIMATED BASED ON GENERAL ENGINEERING GUIDELINES

UTILITY CRITERIA MANUAL WAIVER SUMMARY NOTES AND EXCEPTION GUIDELINES







	LEGEND
ID	DESCRIPTION
	SUNSET VALLEY
	PARD

			SURVEY C	ONTROL TABLE		
NUMBER	NORTHING (GRID)	EASTING (GRID)	NORTHING (PLAN)	EASTING (PLAN	ELEVATION	DESCRIPTION
1	10053852.35	3085630.29	10053852.35	3085630.29	739.97	1/2" REBAR WITH CAP STAMPED "COA PUBLIC WORKS"
2	10052999.00	3085042.53	10052999.01	3085042.53	741.70	1/2" REBAR WITH CAP STAMPED "COA PUBLIC WORKS"
3	10055242.00	3088269.00	10055242.00	3088269.00	719.00	BOREHOLE LOCATION

SURVEYOR ENGINEER: COA QMD MARY P. HAWKINS, RPLS, LICENSE # 4433 ADDRESS: 505 BARTON SPRINGS RD. 7TH FLOOR, SUITE 700 AUSTIN,TX 78704.

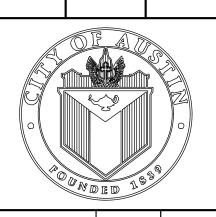
PHONE: (512) 974 - 2661

TREE SURVEY COMPLETED AS PART OF TOPOGRAPHY SURVEY ON 10/22/2019

1.	GR	ID	coo	RDINAT	E VA	LUES	ARE	TEXAS	STATE	PLANE	COORI	DINATES	NAD	83 (2	011) El	POCH
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CO	ORD	INA	TES	(SURF	ACE	DISTA	NCE	COOR	DINATE	VALUES	S) FOR	CONTR	OL PO	TNIC	1 FOR	THIS

- 2. CONTROLLING MONUMENTS FOR THIS PROJECT ARE POINT 1 AND POINT 2 AND THE GRID COORDINATES FOR BOTH POINTS WERE ESTABLISHED FROM MEANED MULTIPLE VRS GPS OBSERVATIONS.
- 3. ELEVATIONS WERE ESTABLISHED UTILIZING MEANED VRS GPS OBSERVATIONS ON CONTROL
- POINTS. THE BASIS OF THESE ELEVATIONS ARE NAVD 88 (GEOID 12A).
- 4. THE COMBINED SCALE FACTOR FOR THIS PROJECT IS 0.999937853.

CITY OF AUSTIN, TEXAS	CE COM FOR INCLI	MEV. NO.	DATE	REVISION DESCRIPTION	
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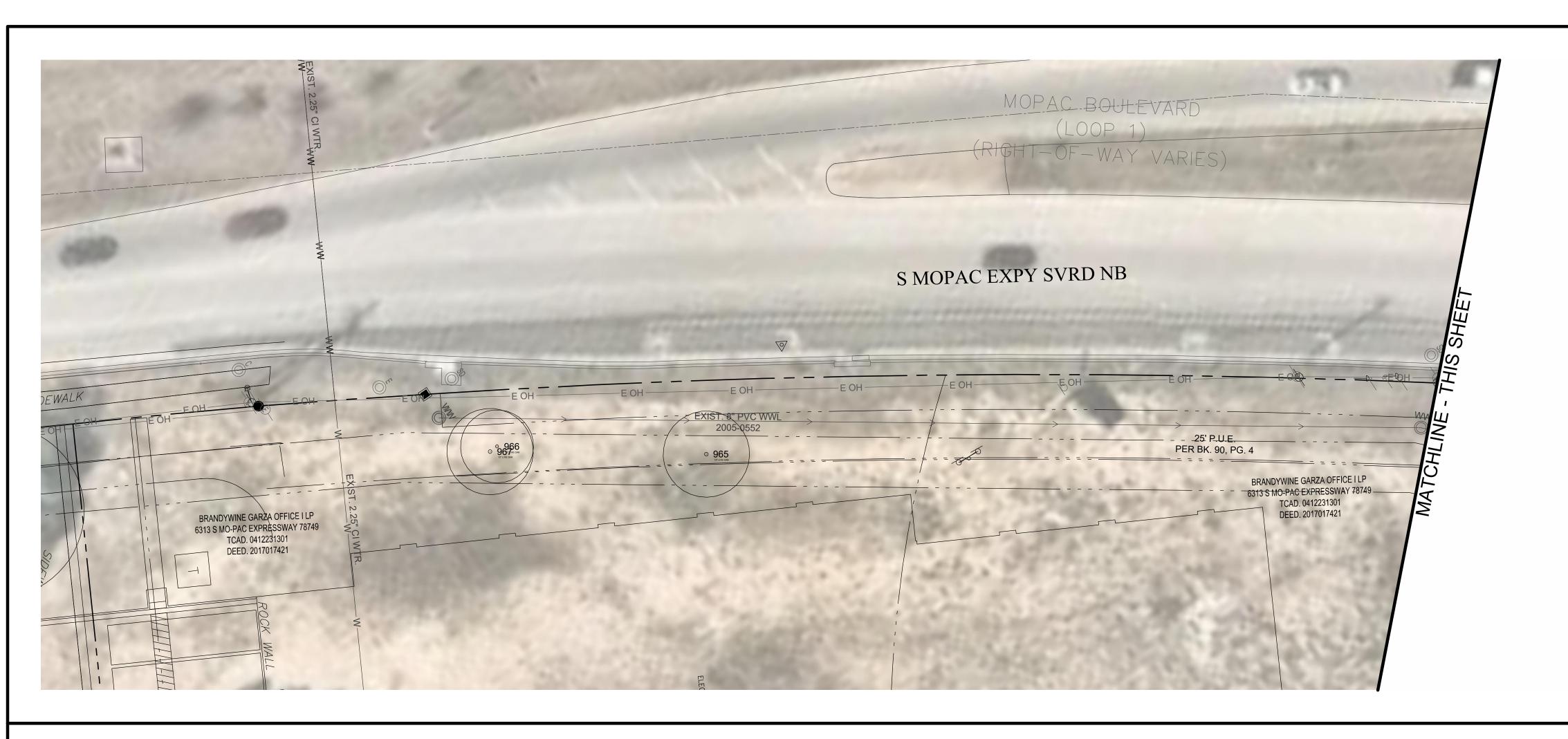


NOTES	NAME	DATE
SURVEY BY	QMD	12/2015
DRAWN BY	IMV	12/2015
DESIGNED BY	IMV	12/2015
CHECKED BY	ESD	12/2015
REVIEWED BY	RL	12/2015
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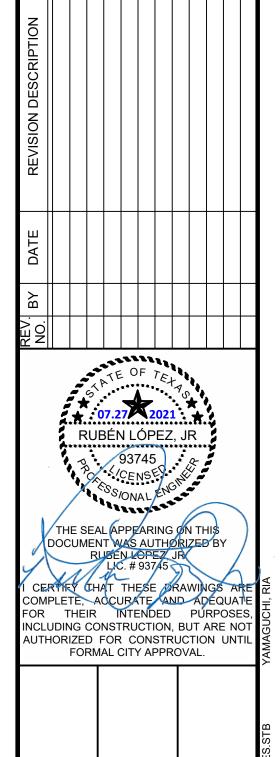
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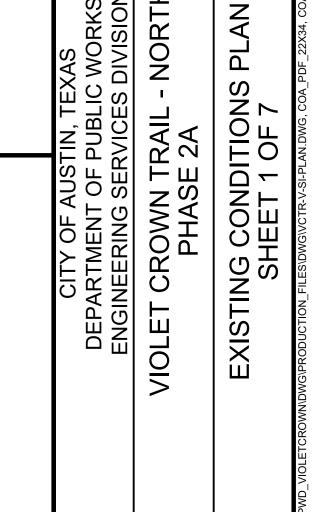
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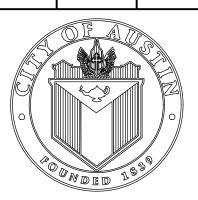












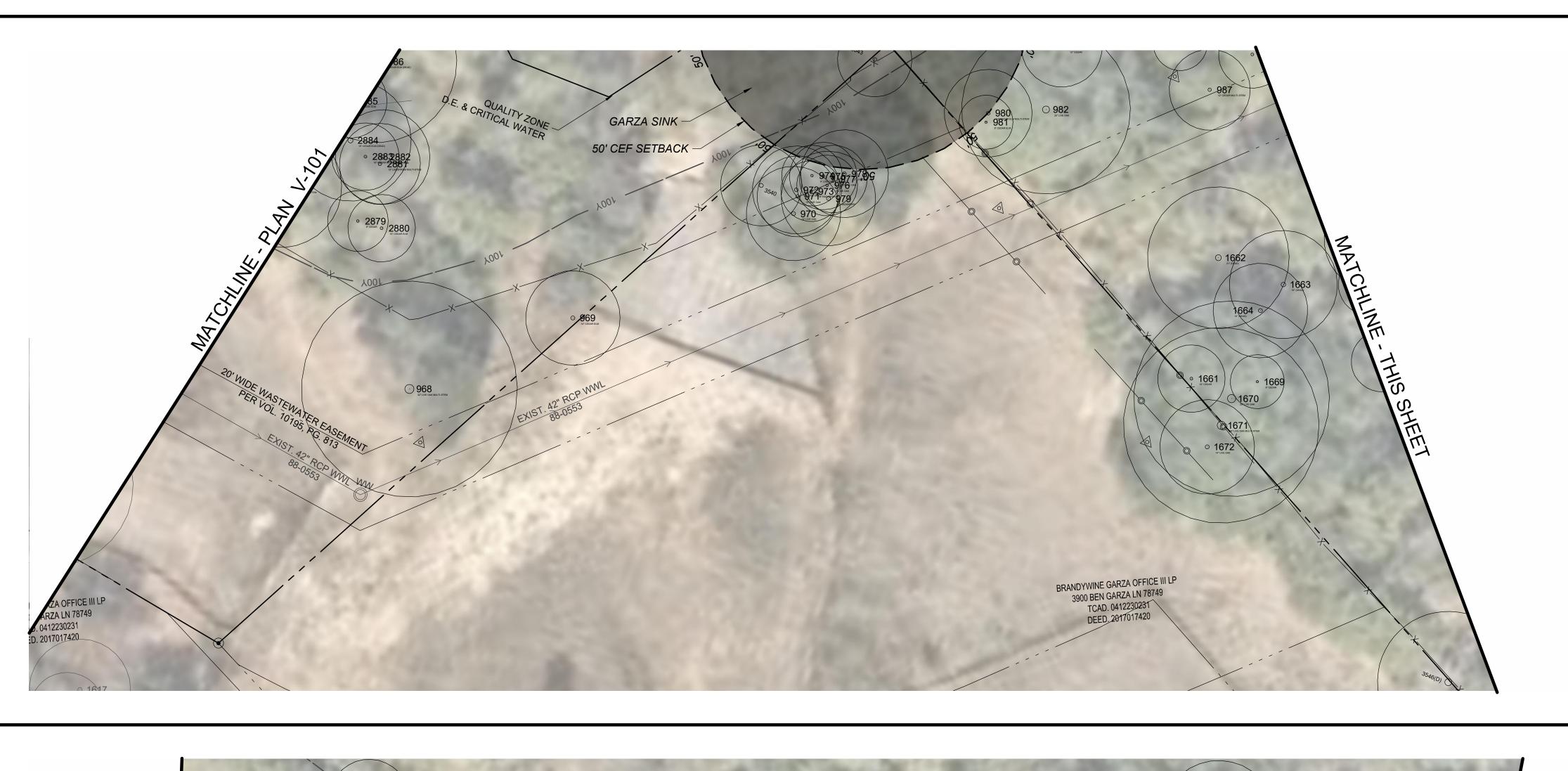
NOTES	NAME	DATE
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REVIEWED BY	RL	12/2015

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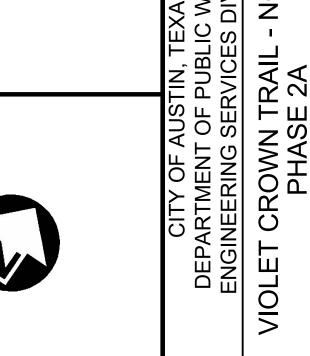
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RUBÉN LÓPEZ, JR

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY RUSEN LOPEZ JR LIC. # 937.45

I CERTIFY THAT THESE PRAWINGS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THEIR INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL FORMAL CITY APPROVAL.

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NOTES	NAME	DATE	/ OF AI
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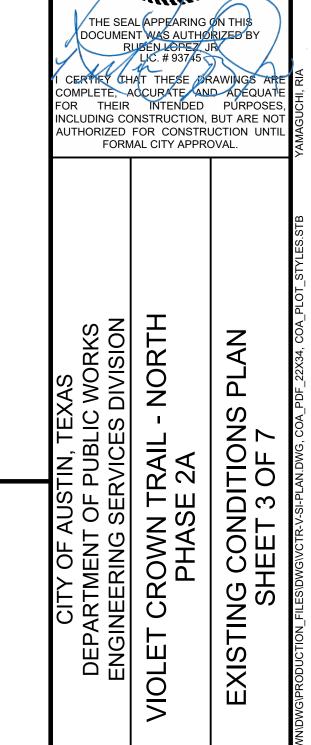
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• 1673 • 1665 • 1665 • 16674 • 16677 • 16677 • 16677 • 16677 • 16677	25.779 ACRES CITY OF AUSTIN S. MO-PAC EXPRESSWAY 78749	© 1680 © 1678 1679 1678 17 CEDIST PLUTE DAY	998 VELVE DAY POLYTICAL POLYTIC	• 1681 • 1682 • 1002	1683 FY CEDMA ELM	1016 ° 1015 N° CEDAR ELM N° C
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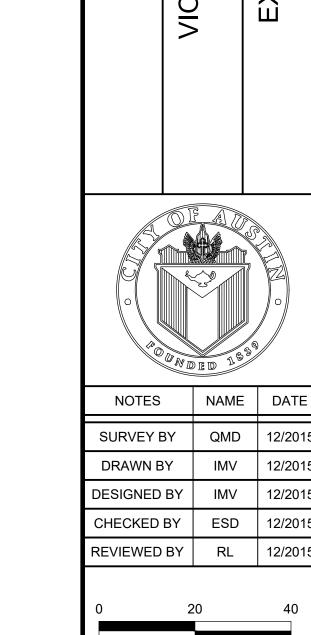




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RUBÉN LÓPEZ, JR

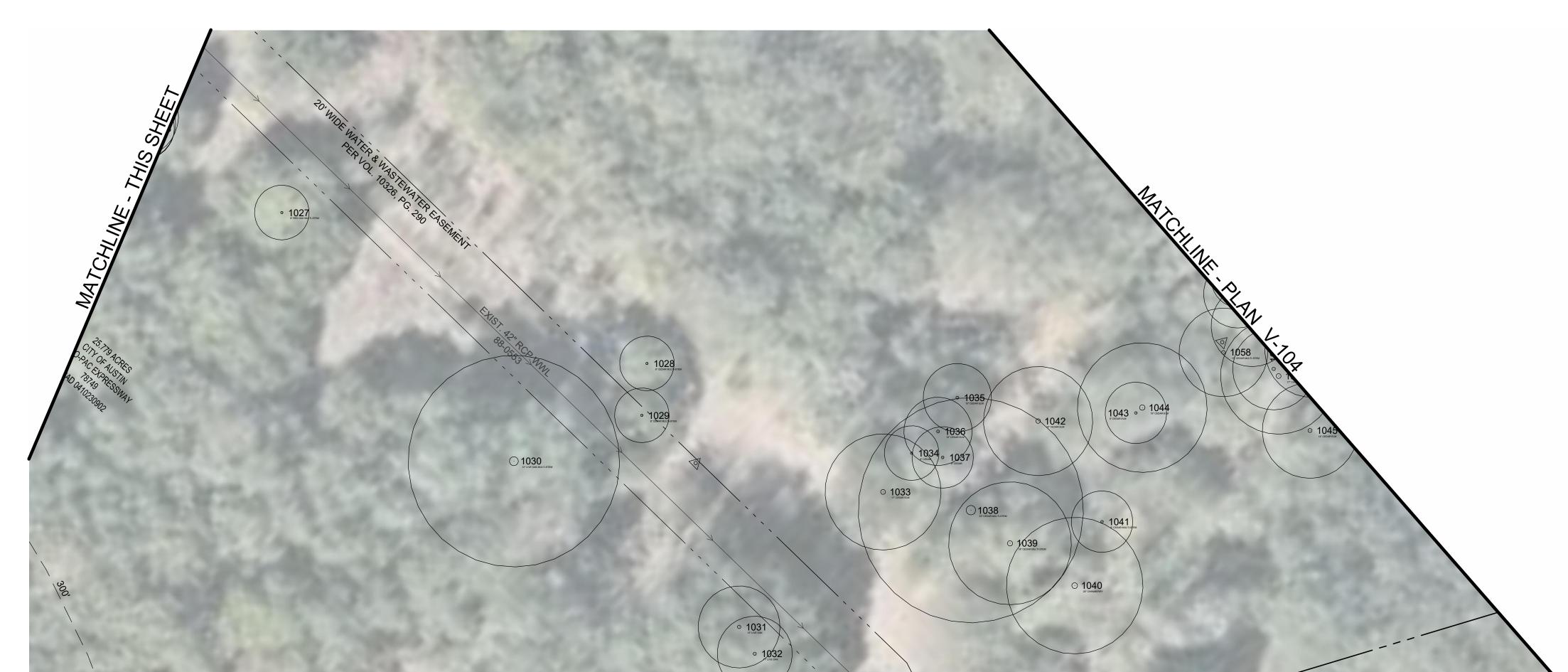


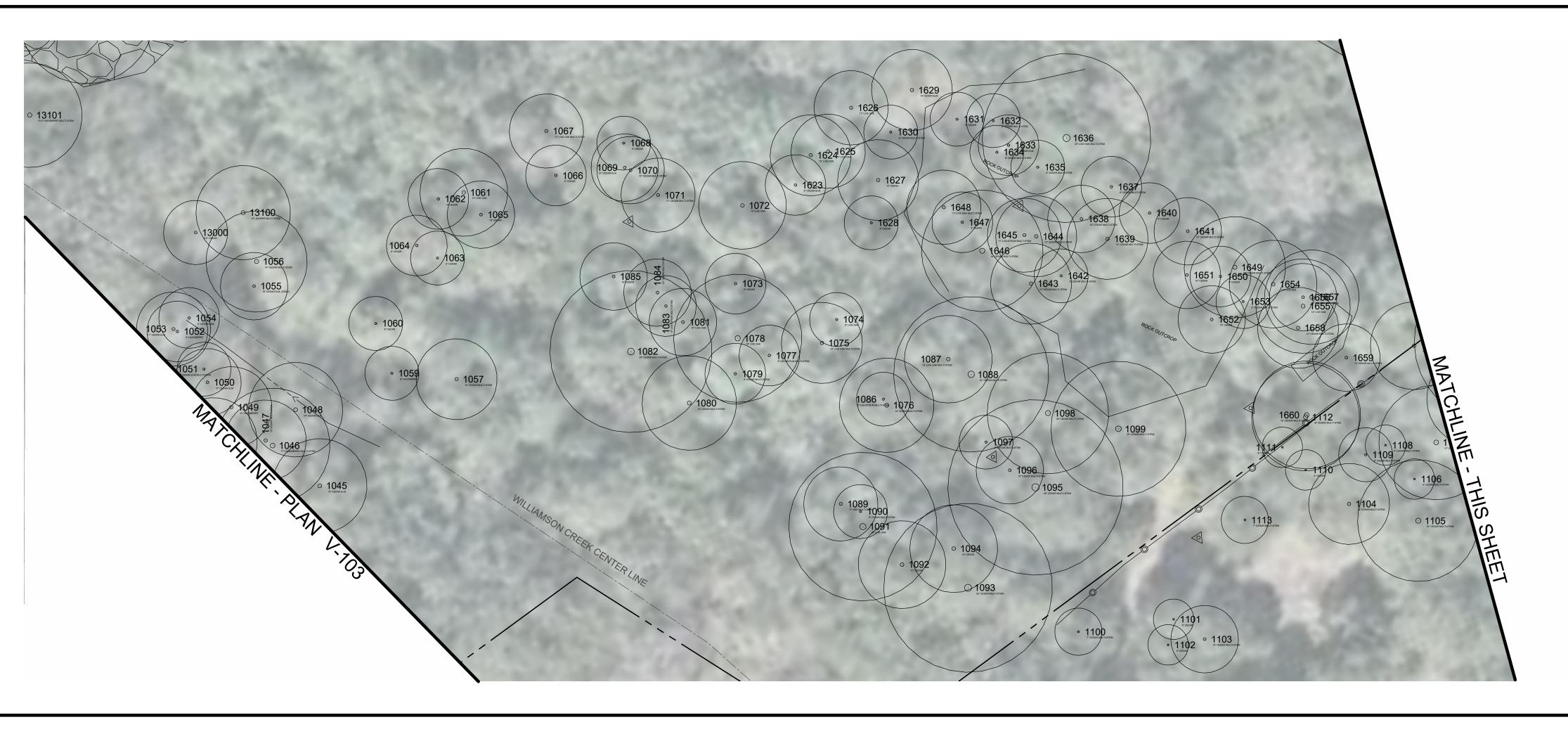


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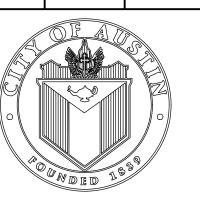
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ING CONDITIONS F SHEET 4 OF 7 CITY OF AUSTIN, TEXADEPARTMENT OF PUBLIC VENGINEERING SERVICES DI



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY RUBEN LOPEZ JR LIC. # 937.45

I CERTIFY THAT THESE TRAWINGS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THEIR INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL FORMAL CITY APPROVAL.

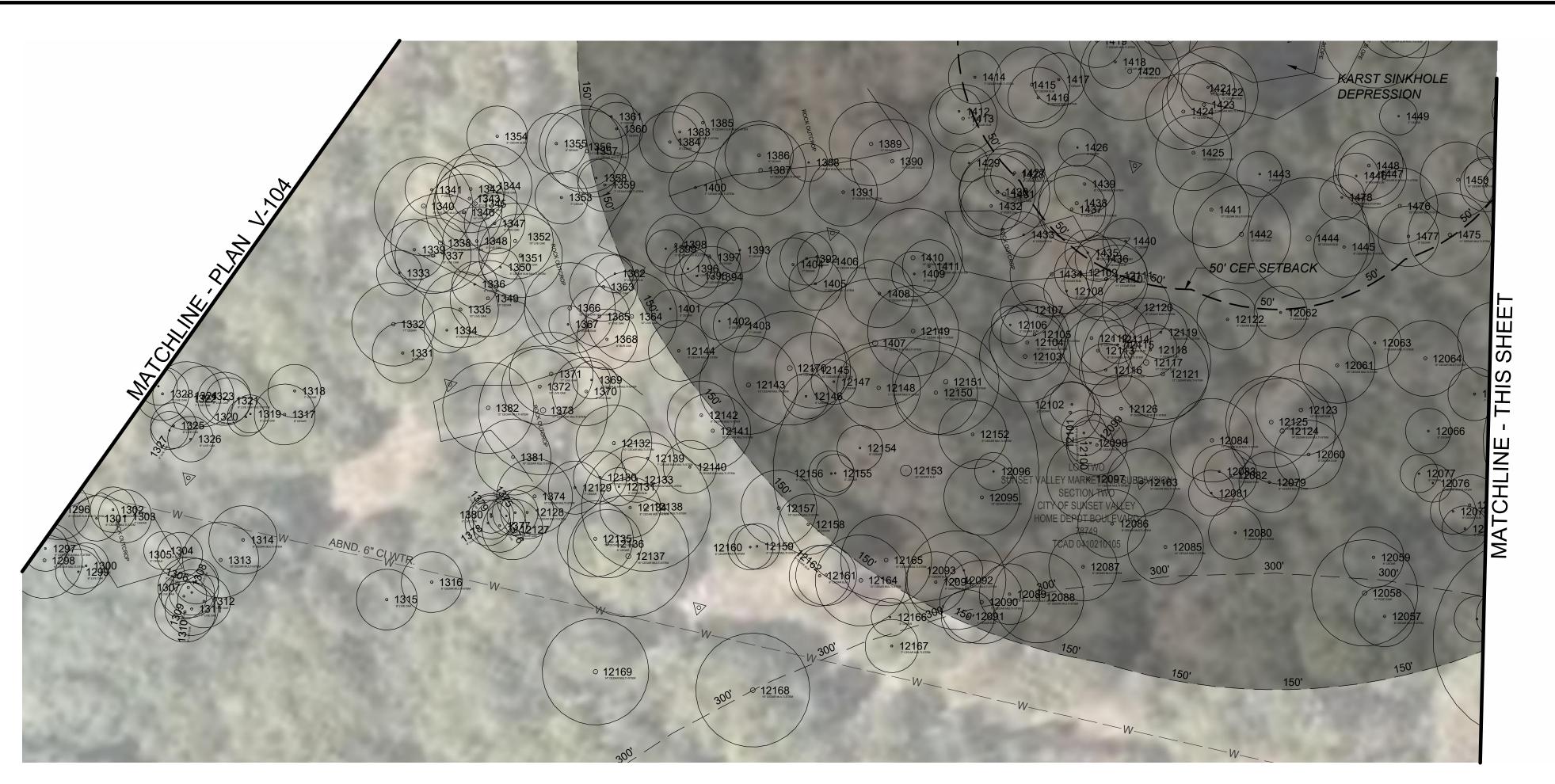
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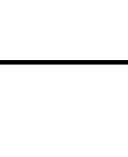
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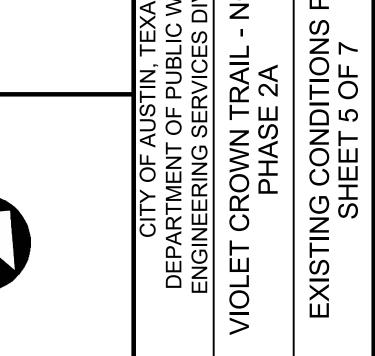
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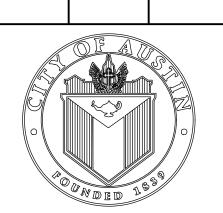




RUBÉN LÓPEZ, JR

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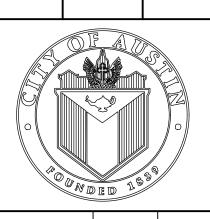
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CITY OF AUSTIN, TEXA
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RUBÉN LÓPEZ, JR

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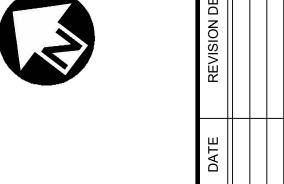
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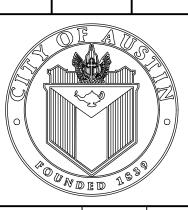
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CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
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S MOPAC EXPY SVRD NB (COD 1) WODE BOARDAND	

CITY OF AUSTIN - STANDARD NOTES EROSION AND SEDIMENTATION CONTROL (MODIFIED FOR USE ON GENERAL PERMIT PROJECTS)

- 1. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, OR EXCAVATION).
- 2. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE ENVIRONMENTAL CRITERIA MANUAL AND THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN.
- 3. THE PLACEMENT OF TREE/NATURAL AREA PROTECTIVE FENCING SHALL BE IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION AND THE APPROVED GRADING/TREE AND NATURAL AREA PLAN.
- 4. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD ON-SITE WITH THE CONTRACTOR, DESIGN ENGINEER, PERMIT APPLICANT, AND GENERAL PERMIT PROGRAM REPRESENTATIVE AFTER INSTALLATION OF THE EROSION/SEDIMENTATION CONTROLS AND THE TREE/NATURAL AREA PROTECTION MEASURES AND PRIOR TO BEGINNING ANY SITE PREPARATION WORK. THE CONTRACTOR SHALL NOTIFY THE GENERAL PERMIT PROGRAM OFFICE AT 512/974-6330, AT LEAST 3 DAYS PRIOR TO THE MEETING DATE.
- ANY SIGNIFICANT VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS MUST BE APPROVED BY THE REVIEWING ENGINEER AND THE GENERAL PERMIT PROGRAM REPRESENTATIVE.
- THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT DAILY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES. SILT ACCUMULATION AT INLET DEVICES SHOULD BE REMOVED WHEN THE DEPTH REACHES TWO (2) INCHES.
- PRIOR TO FINAL ACCEPTANCE BY THE CITY, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING DEBRIS SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.
- ALL WORK MUST STOP IF A VOID IN THE ROCK SUBSTRATE IS DISCOVERED WHICH IS ONE SQUARE FOOT OR LARGER IN TOTAL AREA, BLOWS AIR FROM WITHIN THE SUBSTRATE, AND/OR CONSISTENTLY RECEIVES WATER DURING ANY RAIN EVENT. AT THIS TIME, IT IS THE RESPONSIBILITY OF THE PROJECT MANAGER TO IMMEDIATELY CONTACT THE GENERAL PERMIT PROGRAM REPRESENTATIVE FOR FURTHER INVESTIGATION.
- FIELD REVISIONS TO THE EROSION/SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES. ANY REVISIONS TO THE PERMITTED PLAN MUST BE APPROVED BY THE GENERAL PERMIT PROGRAM OFFICE OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT.
- 10. PERMANENT EROSION/SEDIMENTATION CONTROL: ALL DISTURBED AREAS SHALL BE RESTORED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. WHERE THE CRITERIA MANUAL AND CONTRACT DOCUMENTS DIFFER THE MOST ENVIRONMENTALLY BENEFICIAL MATERIALS/METHOD SHALL BE REQUIRED UNLESS OTHERWISE APPROVED BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE.
- 11. DEVELOPER INFORMATION:

PUBLIC WORKS/ COMMUNITY SERVICES DIVISION COMPANY: CITY OF AUSTIN

CONTACT: JANAE SPENCE

505 BARTON SPRINGS RD. AUSTIN TEXAS 78704

PHONE: (512) 974-3159 E-MAIL:

janae.spence@austintexas.gov

OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS: COMPANY: CITY OF AUSTIN

CONTACT: RUBEN LOPEZ JR. ADDRESS: 505 BARTON SPRINGS RD. AUSTIN TEXAS 78704

(512) 974-7159

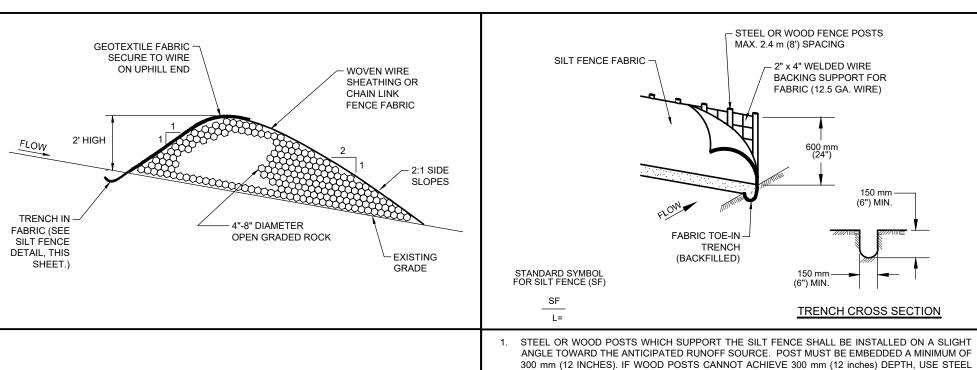
E-MAIL: ruben.lopez@austintexas.gov

PARTY RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL MAINTENANCE:

COMPANY: CONTRACTOR

PARTY RESPONSIBLE FOR TREE/NATURAL AREA PROTECTION MAINTENANCE: COMPANY: CONTRACTOR

- 12. THE CONTRACTOR SHALL NOT DISPOSE OF SURPLUS EXCAVATED MATERIAL FROM THE SITE WITHOUT NOTIFYING THE GENERAL PERMIT PROGRAM REPRESENTATIVE, AT 974-6330, AT LEAST 48 HOURS PRIOR TO THE SPOILS REMOVAL. THIS NOTIFICATION SHALL INCLUDE THE DISPOSAL LOCATION AND A COPY OF THE PERMIT ISSUED TO RECEIVE THE MATERIAL.
- 13. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY PRIOR TO STREET WORK, AND WILL BE REMOVED AS SOON AS THE GENERAL PERMIT PROGRAM REPRESENTATIVE AGREES THAT THERE IS NO POTENTIAL FOR SEDIMENTATION.



STANDARD SYMBOL

FOR ROCK BERM (RB) ____ <u>RB__</u> ___

CONSTRUCTION TRAFFIC DAMAGE, ETC.

USE ONLY OPEN GRADED ROCK, 4-8 INCH DIAMETER, FOR STREAM FLOW CONDITION. JSE OPEN GRADED ROCK, 3-5 INCH DIAMETER, FOR OTHER CONDITIONS.

- ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1 INCH
- OPENING AND MINIMUM WIRE DIAMETER OF 20 GAUGE. ROCK BERM SHALL BE INSPECTED WEEKLY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN WIRE SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO
- WHEN SILT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR ONE FOOT WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED SITE AND IN A MANNER AS TO NOT CREATE A SILTATION PROBLEM.

FUNCTION AS INTENDED, DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT

- DAILY INSPECTION SHALL BE MADE ON SEVERE SERVICE ROCK BERMS; SILT SHALL BE REMOVED WHEN ACCUMULATION REACHES 6 INCHES.
- WHEN SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHALL BE REMOVED

		FABRIC COVERED (SEVERE S BERM	SERVICE) ROCK
GENERAL PERMIT PROGRAM	N/A	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE	STANDARD NO. N / A
·	ADDDOV/ED	USE OF THIS STANDARD.	

OCK	CITY OF AUSTIN WATERSHED PROTECTION DEP	ARTMENT		SILT FENCE	
NO.	RECORD COPY SIGNED BY MORGAN BYARS	09/01/2011 ADOPTED	THE ARCHITECT/ENGINI RESPONSIBILITY FOR A USE OF THIS STA	APPROPRIATE	STANDARD NO 642S-1
	_	PROPRIATE - ABILIZED CON	PREVENT RUNOFF NG SITE 200 mm (8") MIN. FILE FRANSITION STRUCTION HT-OF-WAY		ROADWAY

THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL

THE TRENCH MUST BE A MINIMUM OF 150 mm (6 inches) DEEP AND 150 mm (6 inches) WIDE TO

ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH

SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT

POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE

INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR

SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO

ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 inches). TH

SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT

REPLACEMENT SHALL BE MADE PROMPTY AS NEEDED.

BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

CONTRIBUTE TO ADDITIONAL SILTATION.

TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO

1. USE ONLY OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR ALL CONDITIONS.

2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE

WOVEN WIRE SHEATHING (24") MIN.

- THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT CONSTRUCTION TRAFFIC DAMAGE, ETC
- . IF SEDIMENT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON A APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTION PROBLEM.

WATERSHED PROTECTION DEF	ARTMENT	ROCK BERM	
RECORD COPY SIGNED	8/24/2010	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	standard no.
BY MORGAN BYARS	ADOPTED		639S-1

PLAN VIEW STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50'). THICKNESS: NOT LESS THAN 200 mm (8").

R.O.W.

- WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN DITCH OR WATERCOURSE USING APPROVED METHODS MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT
- TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND

AN	SPILLED, DROPPED, WAS IMMEDIATELY.	HED OR TRA ST BE PROPE	S USED TO TRAP SEDIMENT. ALL SE ACKED ONTO PUBLIC ROADWAY MU RLY GRADED OR INCORPORATE A DR CONSTRUCTION SITE.	JST BE REMOVED	9.
	CITY OF AUSTIN WATERSHED PROTECTION DEP	ARTMENT	STABILIZED CONSTRUCTIO	N ENTRANCE	W
no. 1	RECORD COPY SIGNED BY J. PATRICK MURPHY	5/23/00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 641S-1	_

DIKES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT DIKE. SHALL BE A CONTINUOUS EXTENSION OF THE FABRIC ON THE UPSTREAM FACE. ENTIRE STRUCTURE SHALL BE TRENCHED IN 100 mm (4").

. MATERIAL- THE FABR

PROPERTY

FABRIC WEIGHT

UI TRAVIOI ET (UV) RADIATION

MUUEN BURST STRENGTH

WATER FLOW RATE

THIS MATERIAL SHOULD HAVE A MAX

MANNER THAT WILL FACILITATE CLEAN

OVERTOP THE CURB.

CONSTRUCTED SUCH THAT ANY PO

R.O.W. FLOODING (I.E.< 4 INCHES

ADJACENT AREAS

WORKER, OR PEDESTRIAN

THE INLET FILTER SHAL

NOT SECURED OR AT

BE REPAIRED IMME

DAILY INSPECTION

THE INLET

SILTATION

CONTRAC

MUST CORRESPOND TO THE FOLLOWN

EIGHTEEN (18) MONTHS. THE INLET PROJECTION DEVICES SHOULD BE CONSTRUCTED IN A

MINIMIZING INTERFERENCE WITH CONSTRUCTION ACTIVITIES. THEY SHOULD ALSO BE

COVERAGE -THE FABRIC / WIRE SHOULD COMPLETELY CLIVER THE OPENING OF THE INLET AND DEVICES SHOULD BE INSTALLED WITHOUT PROTRUDING PARTS THAT COULD BE A TRAFFIC.

UPON COMPLETION OF WORK, IF REMOVAL DAMAGES THE CONCRITE CURB, THE CURB MUST

RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORMWATER

ZARD. WHERE SECTIONS OF

SHALL BE MADE BY THE CONTRACTOR AND SILT

ROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF

REMOVED WHEN THE DEPTH REACHES 50 MM (2 INCHES) INCHES OR ON

JNCES / SQUARE YARD

HOURS IN XENON ARC DEVICE

≥ 275 GALLONS / MINUTE / SQUARE FEET

ND DISPOSAL OF TRAPPED SEDIMENT WILE

WEIGHTED WITH 75 mm-125 mm

CONTINUOUS BACKING/PLANKS ON IMPERVIOUS SURFACES.

150 mmX25 mmX150 mm

(6"X1"X6") ANCHORS EVERY

TRENCHED IN 100 mm (4").

600 mm (2')

CUT AWAY OF

FILTER FABRIC

NDING OF STURM WATER WILL NOT CAUSE EXCESSIVE

STANDING WATER) OR DAMAGE TO THE STRUCTURE OR

ATTACHED IN A WAY THAT THEY CALLEASILY BE REMOVED AND ARE

HED BY THE USE OF SAND BAGS. THE IN. ET FILTER MUST BE REMOMD

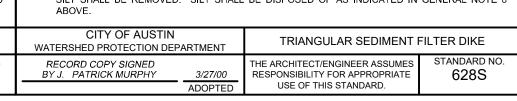
OAT, AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL

SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH

≥ 120 POUND PER SQUARE INCH

STRENGTH RETAINED MIN., AFTER

- DIKES AND SKIRT SHALL BE SECURELY ANCHORED IN PLACE USING 150 mm (6") WIRE STAPLES ON 600 mm (2') CENTERS ON BOTH EDGES AND SKIRT, OR STAKE USING 10M (%") DIAMETER RE-BAR WITH TEE ENDS. FILTER MATERIAL SHALL BE LAPPED OVER ENDS 150 mm (6") TO COVER DIKE TO DIKE JOINTS.
- JOINTS SHALL BE FASTENED WITH GALVANIZED SHOAT RINGS.
- INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6
- DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION AFTER THE DEVELOPMENT SITE IS COMPLETLY STABILIZED, THE DIKES AND ANY REMAINING SILT SHALL BE REMOVED. SILT SHALL BE DISPOSED OF AS INDICATED IN GENERAL NOTE 8



FLOW POSTS OR MULCH MATERIA ANCHORS TO FILL SEAM BETWEEN THE SOCK AND TH (BOTH SIDES) SE UNTREATED WOOD CHIPS PRODUCED FROM A 3 (THREE INCH MINUS SCREENING PROCESS (EQUIVALENT TO TXDOT ITEM 161, COMPOST, SECTION 1.6.2.B, WOOD CHIP MULCH SOCK MULCH SOCK MULCH CONSISTS PRIMARILY OF ORGANIC MATERIAL SEPARATED AT THE POINT OF GENERATION, AND MAY MINIMUM 12" (300 mm) INCLUDE: SHREDDED BARK, STUMP GRINDINGS, OR OVERLAP DO NOT COMPOSTED BARK. STACK MULCH SOCKS LARGE PORTIONS OF SILT, CLAYS, OR FINE SANDS ARE NOT ACCEPTABLE IN THE MULCH.

- STEEL OR WOOD POSTS WHICH SUPPORT THE MULCH SOCK SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 600mm (24 inches). IF WOOD POSTS CANNOT ACHIEVE 600mm (24 inches) DEPTH, USE STEEL POSTS. EARTH ANCHORS ARE ALSO ACCEPTABLE.
- THE TOE OF THE MULCH SOCK SHALL BE PLACED SO THAT THE MULCH SOCK IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. IN ORDER TO PREVENT WATER FROM FLOWING BETWEEN THE JOINTS OF ADJACENT ENDS OFMULCH SOCKS, LAP THE ENDS OF ADJACENT MULCH SOCKS A MINIMUM OF 300mm (12 inches).
- MULICH MATERIAL MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH; IT IS NOT ACCEPTABLE FOR THE MULCH MATERIAL TO CONTAIN GROUND CONSTRUCTION DEBRIS, BIOSOLIDS, OR MANURE.
- SOCK MATERIAL WILL BE 100% BIODEGRADABLE, PHOTODEGRADABLE, OR RECYCLABLE SUCI AS BURLAP, TWINE, UV PHOTOBIODEGRADABLE PLASTIC, POLYESTER, OR ANY OTHER ACCEPTABLE MATERIAL
- MULCH SOCKS SHOULD BE USED AT THE BASE OF SLOPES NO STEEPER THAN 2:1 AND SHOULD NOT EXCEED THE MAXIMUM SPACING CRITERIA PROVIDED IN CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL TABLE 1.4.5.F.1 FOR A GIVEN SLOPE CATEGORY.
- ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT

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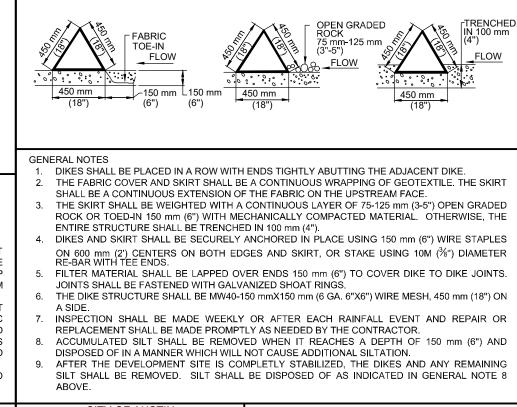
•	JIVIE GIET/THOIV	CONTRIBUTE TO ABBITA
MULCH SOCK	V	CITY OF AUSTI
WOLCH SOCK	EPARTMENT	WATERSHED PROTECTION D
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE	08/24/2010	RECORD COPY SIGNED BY MORGAN BYARS

FILTER DIKE CURB INLET PROTECT RECORD COPY SIGNED HE ARCHITECT/ENGINEER ASSUMES 628S-2 USE OF THIS STANDARD. USE OF THIS STANDARD. FILTER FABRIC SHALL ENTIRELY - 150 mm X 150 mm COVER DIKE AND SKIRT. (6" X 6") WIRE MESH STRUCTURE **INSTALLATION DETAIL OPTIONS:** GEOTEXTILE FABRIC TOE-IN 150 mm (6") MINIMUM

- EDGE OF PROPOSED EXCAVATION EXISTING PAVING -TRIANGUI AR RUN-OFF FLOW_ FILTER DIKE SPOILS AND/OR (CoA STD. 628S) STOCKPILE O LB SANDBAGS @ 2' O.C - EXISTING CURB AND GUTTER

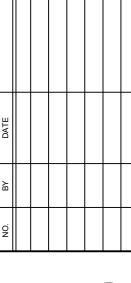
THE TEMPORARY SPOILS/STOCKPILE STORAGE AREA AND STAGING AREA MAY BE LOCATED

- DIRECTLY ADJACENT TO THE EXCAVATION AND ON THE PAVEMENT. ANY SPOIL NOT INTENDED TO BE REUSED WILL BE HAULED TO AN APPROVED OR PERMITTED
- INSTALL TRIANGULAR SEDIMENT FILTER DIKE (DETAIL 628S) ACROSS FULL WIDTH OF TRAFFIC CLOSURE AND DOWNSTREAM OF CONSTRUCTION AREA PERPENDICULAR TO CURB AND PLACED TO EFFECTIVELY CATCH AND CONTAIN SEDIMENT LADEN RUNOFF FROM THE EXCAVATED AREA. FILTER DIKE TO FOLLOW ACTIVE CONSTRUCTION. REMOVING AND RE-SETTING FILTER DIKE IS CONSIDERED SUBSIDIARY TO BARRICADES AND TRAFFIC HANDLING.
- ADDITIONAL EROSION/SEDIMENTATION CONTROL FOR WORK IN PAVED AREAS FOR GENERAL PERMIT PROGRAM PROJECTS



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GENERAL PERMIT PROGRAM (GPP) STANDARD ENVIRONMENTAL NOTES:

ADDITIONAL AREAS:

- ANY ADDITIONAL AREAS REQUIRED FOR CONSTRUCTION OF THIS PROJECT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR MUST SECURE CITY OF AUSTIN APPROVAL OF PROPOSED ADDITIONAL AREAS PRIOR TO USE. APPROVAL OF "CORRECTION REQUEST" MUST BE SECURED FROM THE GENERAL PERMIT PROGRAM OFFICE OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT
- 2. ALL ASSOCIATED PERMITS AND FEES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- IN ORDER TO SECURE APPROVAL FOR USE OF ADDITIONAL AREAS, CONTRACTOR MUST PROVIDE COMPLETE "CORRECTION REQUEST" SUBMITTAL TO GENERAL PERMIT PROGRAM OFFICE AND ALLOW A ONE WEEK COMMENT PERIOD FOR EACH REVIEW. CONTRACTOR SHOULD REQUEST INFORMATION ON THE ELEMENTS REQUIRED TO BE INCLUDED IN THE SUBMITTAL FROM THE OWNER'S REPRESENTATIVE OR THE GENERAL PERMIT PROGRAM OFFICE.
- CONTRACTOR MUST INSTALL AND MAINTAIN EROSION/SEDIMENTATION CONTROLS AND TREE PROTECTION FOR ALL SUCH AREAS IN ACCORDANCE WITH THE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL AND AS INCLUDED IN THE APPROVED SUBMITTAL OR DIRECTED IN THE FIELD BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE.
- 5. A SIGNED COPY OF THE PLANS PERMITTED THROUGH THE GENERAL PERMIT PROGRAM MUST BE KEPT ON SITE AND ACCESSIBLE AT ALL TIMES DURING PROJECT CONSTRUCTION.

DEWATERING:

CONTRACTOR IS RESPONSIBLE FOR DEWATERING OF WORK AREA. CONTRACTOR MUST SECURE CITY OF AUSTIN APPROVAL OF PROPOSED DEWATERING PROCEDURES PRIOR TO INSTALLATION OR USE. APPROVAL MUST BE SECURED FROM THE GENERAL PERMIT PROGRAM (GPP) OFFICE OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT CONTRACTOR MUST PROVIDE COMPLETE SUBMITTAL TO GPP OFFICE AND ALLOW AN ONE WEEK (MIN.) COMMENT PERIOD FOR EACH REVIEW. CONTACT THE GPP OFFICE FOR SUBMITTAL REQUIREMENTS.

FUEL STORAGE:

FUEL STORAGE IS PROHIBITED ON THIS PROJECT. ADDITIONALLY, THE CONTRACTOR IS REQUIRED TO NOTIFY THE GENERAL PERMIT PROGRAM OFFICE IMMEDIATELY FOLLOWING ANY SPILL OF FUEL OR OTHER TOXIC MATERIAL. CONTRACTOR IS REQUIRED TO FOLLOW-UP WITH WRITTEN DOCUMENTATION, INCLUDING A COMPLETE DESCRIPTION OF THE INCIDENT, MATERIAL SPILLED, AND ACTIONS TAKEN TO CONTAIN AND CLEAN-UP MATERIAL

FUGITIVE DUST CONTROL:

ALL PROJECTS APPROVED THROUGH THE GENERAL PERMIT PROGRAM (GPP) MUST COMPLY WITH THE CODE OF THE CITY OF AUSTIN AND THE ENVIRONMENTAL CRITERIA MANUAL REQUIREMENTS TO CONTROL AIRBORNE DUST. COMPLIANCE IS REQUIRED FOR ENTIRE PROJECT SITE AS WELL AS ASSOCIATED OPERATIONS. CONTACT THE GPP OFFICE FOR RECOMMENDED CONTROL METHODS.

SPOILS STORAGE:

NO SPOILS STORAGE IS ALLOWED WITHIN A CRITICAL WATER QUALITY ZONE, A 100-YEAR FLOODPLAIN, OR ON A SLOPE WITH A GRADIENT OF MORE THAN 15 PERCENT

E/S CONTROLS FOR BORE / RECEIVING PIT LOCATIONS:

TEMPORARY E/S CONTROLS MUST SURROUND THE ENTIRETY OF BORING OPERATIONS. INCLUDING PIT, EQUIPMENT, ETC. FOR LOCATIONS WITHIN IMPERVIOUS AREAS, TEMPORARY CONTROL WILL BE TRIANGULAR FILTER DIKE (COA STANDARD DETAIL #628S). DIKE FLAP WILL BE CONTINUOUSLY WEIGHTED DOWN THROUGH THE USE OF 1" BY 4" WOOD STRIPS NAILED TO THE PAVEMENT, EXCEPT FOR THE ACCESS POINT. PLACEMENT OF TEMPORARY E/S CONTROLS ACROSS ACCESS POINT WILL BE REQUIRED WHENEVER THE SITE IS NOT ACTIVELY USED. FOR LOCATIONS WITHIN PERVIOUS AREAS, TEMPORARY CONTROL WILL BE SILT FENCE (COA STANDARD DETAIL #642S-1) OR MULCH SOCKS (COA STANDARD DETAIL #648S-1), AS INDICATED ON APPROVED PLANS.

SOIL RETENTION BLANKET:

UNLESS OTHERWISE INDICATED IN THE PROJECT DOCUMENTS, INSTALLATION OF SOIL RETENTION BLANKET WILL BE REQUIRED FOR ALL IMPACTED SLOPES GREATER THAN 3:1 AND ALL IMPACTED AREAS WITHIN DRAINAGE CONVEYANCES. (CITY OF AUSTIN STANDARD SPECIFICATION ITEM 605S) SOIL RETENTION BLANKET SUBMITTAL MUST BE APPROVED BY PROJECT ENGINEER AND GENERAL PERMIT PROGRAM (GPP) REPRESENTATIVE PRIOR TO USE AND MUST INCLUDE PRODUCT AND INSTALLATION DETAILS PROVIDED BY MANUFACTURER. FINISH GRADING MUST BE INSPECTED AND APPROVED BY GPP INSPECTOR PRIOR TO BLANKET INSTALLATION. INSTALLATION MUST BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND MUST BE INSPECTED AND APPROVED BY GPP REPRESENTATIVE PRIOR TO ACCEPTANCE.

SOD INSTALLATION:

REVEGETATION WITHIN MANAGED TURF AREAS MUST BE ACCOMPLISHED THROUGH THE INSTALLATION OF SOLID BLOCK GRASS SOD. SOD TYPE MUST MATCH ADJACENT GRASS TYPE. QUESTIONS REGARDING SOD TYPE WILL BE RESOLVED BY THE GENERAL PROGRAM PERMIT REPRESENTATIVE. REFER TO CITY OF AUSTIN STANDARD SPECIFICATION ITEM NO. 602S: SODDING FOR EROSION CONTROL, UNLESS OTHERWISE NOTED ON THE APPROVED

TxDOT RIGHTS-OF-WAY:

TOPSOIL (TxDOT ITEM NO. 160), SOIL RETENTION BLANKET (TxDOT ITEM NO. 169), AND REVEGETATION (TXDOT ITEM NO. 164) INSTALLED WITHIN TEXAS DEPARTMENT OF TRANSPORTATION (TxDOT) RIGHT-OF-WAY SHALL COMPLY WITH "REQUIREMENTS FOR INSTALLATION OF UTILITIES WITHIN THE STATE RIGHT-OF-WAY, AUSTIN DISTRICT".

PROJECT SEQUENCE:

(REFER TO FULL PLAN SET FOR PROJECT-SPECIFIC ADDITIONS, IF APPLICABLE.)

PRIOR TO CONSTRUCTION:

- SECURE APPLICABLE COA PERMITS, INCLUDING APPROVAL UNDER GENERAL PERMIT PROGRAM AND RIGHT-OF-WAY EXCAVATION PERMIT.
- NOTIFY GENERAL PERMIT PROGRAM REPRESENTATIVE PRIOR TO PLACEMENT OF E/S CONTROLS AND TREE PROTECTION FENCING. ALL PROPOSED PHASING OF CONTROLS MUST BE SUBMITTED TO AND APPROVED BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE PRIOR TO THE FIELD PRE-CONSTRUCTION CONFERENCE.
- NOTIFY COA TEMPORARY TRAFFIC CONTROL REPRESENTATIVE PRIOR TO PLACEMENT OF 7. TEMPORARY TRAFFIC CONTROLS. ALL PROPOSED PHASING OF CONTROLS MUST BE INDICATED ON APPROVED TEMPORARY TRAFFIC CONTROL PLAN AND SEALED BY PROFESSIONAL ENGINEER.
- PLACE TEMPORARY E/S CONTROLS AND TREE PROTECTION FENCING PRIOR TO BEGINNING ANY EXCAVATION. INSTALL C.I.P. SIGN, IF APPLICABLE.
- HOLD ENVIRONMENTAL PRE-CONSTRUCTION CONFERENCE ON SITE WITH THE CONTRACTOR, OWNER'S REPRESENTATIVE, AND GENERAL PERMIT PROGRAM REPRESENTATIVE AFTER INSTALLATION OF E/S CONTROLS AND TREE PROTECTION FENCING AND PRIOR TO ANY TRENCHING OPERATIONS.

6. PLACE TEMPORARY TRAFFIC CONTROL DEVICES.

PROJECT CONSTRUCTION:

- 1. BEGIN CONSTRUCTION. NOTIFY GENERAL PERMIT PROGRAM REPRESENTATIVE A MINIMUM OF 48 HOURS IN ADVANCE OF TRANSITION BETWEEN PHASES.
- CONTACT GENERAL PERMIT OFFICE TO SCHEDULE FIELD INSPECTION PRIOR TO BEGINNING INSTALLATION OF PERMANENT E/S CONTROLS.
- COMPLETE RESTORATION OF ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES FOR THIS PROJECT. (PERMANENT E/S CONTROLS)
- 4. REMOVE TEMPORARY TRAFFIC CONTROL DEVICES RELATED TO WORK AREAS OUTSIDE OF 12. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE
- 5. HOLD ENVIRONMENTAL POST-CONSTRUCTION CONFERENCE ON SITE WITH THE 13. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN 4 INCHES SHALL BE PERMITTED WITHIN CONTRACTOR, OWNER'S REPRESENTATIVE, AND GENERAL PERMIT PROGRAM REPRESENTATIVE. ALL PERMANENT E/S CONTROLS MUST BE ACCEPTED BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE. PERMANENT CONTROLS SHALL CONSIST OF REVEGETATION PER DETAILS 602, 604S, AND 609S AS INDICATED ON APPROVED PLANS.
- 6. FOLLOWING FINAL ACCEPTANCE OF PERMANENT E/S CONTROLS BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE, REMOVE TEMPORARY E/S CONTROLS. CLEAN EXISTING STORM DRAINAGE SYSTEMS AS NECESSARY DUE TO CONSTRUCTION OPERATIONS.
- 7. DRESS-UP AND RESTORE ANY AREAS DISTURBED BY REMOVAL OF TEMPORARY E/S CONTROLS DESCRIBED ABOVE.

REQUIRED SUBMITTALS:

SUBMITTALS REQUIRED TO BE APPROVED BY GENERAL PERMIT PROGRAM REPRESENTATIVE INCLUDE: SUBMITTALS TRIGGERED BY CITY OF AUSTIN SERIES 600 SPECIFICATIONS AND RELATED SPECIAL PROVISIONS/SPECIFICATIONS, CONSTRUCTION SCHEDULE, TREE PROTECTION, P-6 AND OTHER ROOT ZONE PROTECTION/MITIGATION MEASURES, DEWATERING PLAN, WATERING SCHEDULE FOR REVEGETATION AREAS, AND ANY VEGETATIVE REPLACEMENT PROPOSALS, IF NOT ALREADY PART OF THE PERMITTED PLAN SET.

CITY OF AUSTIN - STANDARD NOTES TREE AND NATURAL AREA PROTECTION (MODIFIED FOR USE ON GENERAL PERMIT PROJECTS)

- PROTECTED DURING CONSTRUCTION WITH TEMPORARY MEASURES.
- 2. PROTECTIVE MEASURES SHALL BE INSTALLED ACCORDING TO CITY OF AUSTIN STANDARDS 3. FOR TREE PROTECTION
- PROTECTIVE MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING), AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE PROJECT.
- EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD-UP. COMPACTION OR CUTTING OF 4. CRITICAL ROOT ZONE WITHIN TREE DRIP LINES.
- TREE PROTECTION SHALL COMPLETELY SURROUND THE TREES OR GROUP OF TREES AND WILL BE LOCATED AT THE OUTERMOST LIMIT OF BRANCHES (DRIP LINE). FOR NATURAL AREAS, PROTECTIVE MEASURES SHALL FOLLOW THE LIMIT OF CONSTRUCTION LINE, IN 5. ORDER TO PREVENT THE FOLLOWING:
- A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC 6. ALL PRUNING SHALL PRESERVE THE NATURAL CHARACTER OF THE TREE. OR STORAGE OF EQUIPMENT OR MATERIALS;
- B. ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN 6 INCHES CUT 7. OR FILL) OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE GENERAL PERMIT PROGRAM OFFICE OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT; C. WOUNDS TO EXPOSED ROOTS, TRUNK OR LIMBS BY MECHANICAL EQUIPMENT;
- D. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING. AND FIRES.
- EXCEPTIONS TO INSTALLING PROTECTIVE FENCES AT CRITICAL ROOT ZONES MAY BE PERMITTED IN THE FOLLOWING CASES:
- A. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING APPROXIMATELY 2 FEET BEYOND THE AREA DISTURBED;
- B. WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA;

- C. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN 6 FEET TO THE BUILDING;
- WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE, OR OTHER SPECIAL REQUIREMENTS, CONTACT THE GENERAL PERMIT PROGRAM OFFICE AT

SPECIAL NOTE: FOR THE PROTECTION OF NATURAL AREAS, NO EXCEPTIONS TO INSTALLING FENCES AT THE LIMIT OF CONSTRUCTION LINE WILL BE PERMITTED.

WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE 5 FEET OR CLOSER TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF 8 FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING.

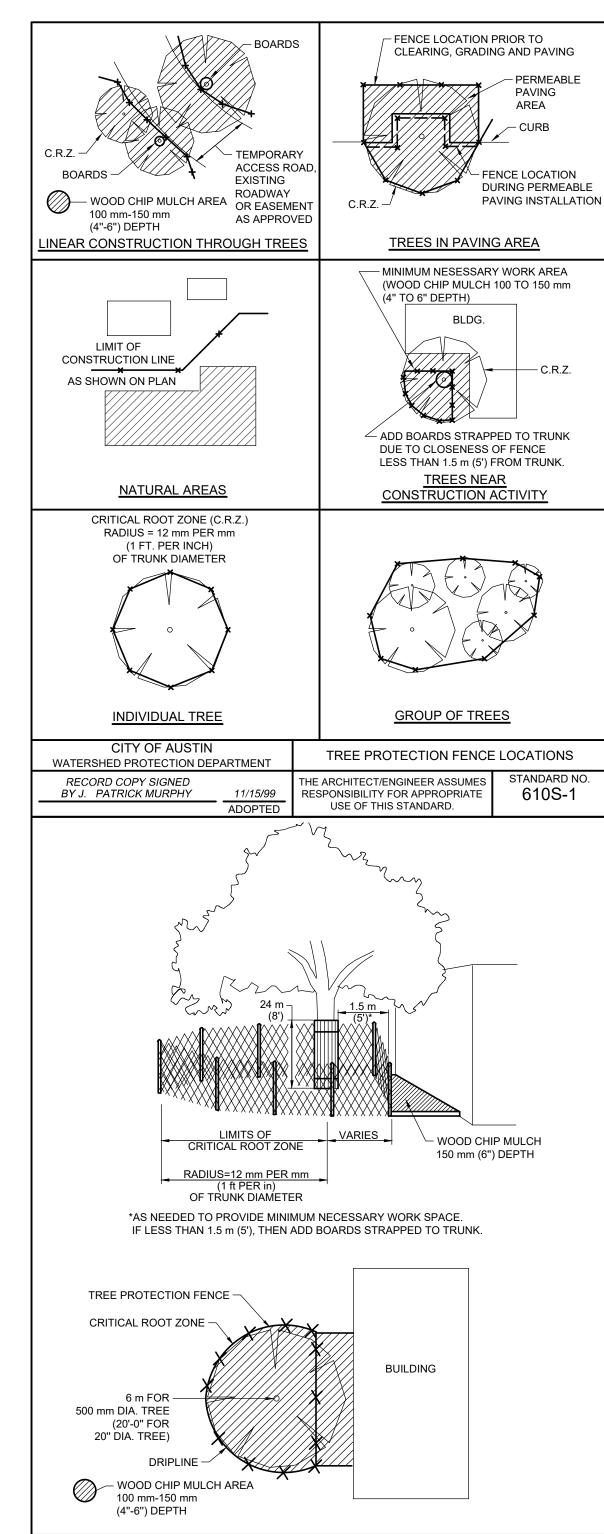
- WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN AREAS OF UNPROTECTED ROOT ZONES THOSE AREAS SHOULD BE COVERED WITH 12 INCHES OF ORGANIC MULCH TO MINIMIZE SOIL COMPACTION DURING CONSTRUCTION. FILTER FABRIC UNDERLAYMENT MAY BE REQUIRED AT DIRECTION OF GENERAL PERMIT PROGRAM REPRESENTATIVE BASED ON SITE CONDITIONS AND CONSTRUCTION ACTIVITIES. MAXIMUM FOUR (4) INCHES DEPTH MAY BE LEFT IN PLACE AFTER CONSTRUCTION WITH APPROVAL FROM THE GENERAL PERMIT PROGRAM REPRESENTATIVE.
- ALL GRADING WITHIN PROTECTED ROOT ZONE AREAS SHALL BE DONE BY HAND OR WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE. PRIOR TO GRADING, RELOCATE PROTECTIVE FENCES TO 2 FEET BEHIND THE GRADE CHANGE AREA.
- ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN 2 DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
- 10. PRIOR TO EXCAVATION OR GRADE CUTTING WITHIN TREE DRIPLINES, MAKE A CLEAN CUT BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT TO MINIMIZE DAMAGE TO REMAINING ROOTS.
- 11. TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES SHOULD BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CROWNS SHOULD BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
- PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
- THE DRIPLINE OF TREES. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
- 14. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS. SEE NOTE FOUR (4) OF SUPPLEMENTAL TREE PROTECTION NOTES FOR ADDITIONAL REQUIREMENTS.
- 15. ALL FINISHED PRUNING MUST BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES AVAILABLE ON REQUEST FROM THE GENERAL PERMIT PROGRAM OFFICE).
- 16. DEVIATIONS FROM THE ABOVE NOTES MAY BE CONSIDERED ORDINANCE VIOLATIONS IF THERE IS SUBSTANTIAL NONCOMPLIANCE OR IF A TREE SUSTAINS DAMAGE AS A RESULT.
- 17. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.

SUPPLEMENTAL TREE PROTECTION NOTES

- 1. ALL TREE PROTECTION MUST COMPLY WITH CITY OF AUSTIN REQUIREMENTS AS OUTLINED IN THE ENVIRONMENTAL CRITERIA MANUAL AND AS INDICATED BY STANDARD COA NOTES AND DETAILS INCLUDED WITHIN THIS DOCUMENT SET.CONTRACTOR SHALL INSTALL PROTECTION PRIOR TO PRE-CONSTRUCTION CONFERENCE, MAKE ADJUSTMENTS TO PROTECTION AS DIRECTED BY THE GPP REPRESENTATIVE, AND MAINTAIN PROTECTION UNTIL PROJECT IS COMPLETE.
- ALL TREES AND NATURAL AREAS SHOWN ON PLAN TO BE PRESERVED SHALL BE 2. TYPE AND LOCATION OF ALL TREE PROTECTION MUST BE APPROVED IN THE FIELD BY THE GENERAL PERMIT PROGRAM (GPP) REPRESENTATIVE PRIOR TO CONSTRUCTION.
 - WALK-THROUGH: CONTRACTOR SHALL CONDUCT WALK-THROUGH MEETING WITH GENERAL PERMIT PROGRAM REPRESENTATIVE PRIOR TO PERFORMING ANY PRUNING ACTIVITIES ON TREES IN PROJECT AREA. PURPOSE OF WALK-THROUGH WILL BE TWOFOLD. ONE PURPOSE WILL BE TO DETERMINE THE MINIMUM AMOUNT OF PRUNING NECESSARY TO ALLOW CONSTRUCTION WORK TO BE COMPLETED. SECOND PURPOSE WILL BE TO DETERMINE AREAS OF PROJECT IN WHICH EXHAUST DIVERTERS WILL BE REQUIRED ON CONSTRUCTION EQUIPMENT TO PREVENT SCORCHING OF EXISTING TREES.
 - ALL PRUNING MUST BE PERFORMED IN ACCORDANCE WITH ANSI A300 (PART 1) 2001 AMERICAN NATIONAL STANDARD FOR TREE CARE OPERATIONS (PRUNING), OR LATEST APPROVED VERSION. THIS DOCUMENT MAY BE OBTAINED ONLINE FOR A FEE AT WWW.ANSI.ORG.
 - PRUNING SHALL BE DONE WITH CLEAN, SHARP TOOLS. TO PREVENT BARK TEARS, THE WEIGHT OF THE BRANCH SHALL BE REMOVED BEFORE MAKING FINAL PRUNING CUT.

ONLY COLLAR CUTS ARE ACCEPTABLE. NO FLUSH CUTS OR STUB CUTS WILL BE ALLOWED.

- ALL BRANCHES THAT ARE BROKEN OR DAMAGED DURING CONSTRUCTION SHALL BE
- PRUNING CUTS OR DAMAGED AREAS ON AN OAK TREE SHALL BE PAINTED WITHIN FIVE MINUTES WITH A STANDARD TREE WOUND DRESSING. TREE WOUND DRESSING SHALL BE EITHER TREEKOTE AEROSOL OR TANGLEFOOT PRUNING SEALER (OR APPROVED EQUAL). THIS ALSO APPLIES TO WOUNDS CREATED BY CONSTRUCTION VEHICLES OR EQUIPMENT. ALL PRUNING MUST BE IN ACCORDANCE WITH COA OAK WILT PREVENTION POLICY.
- SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT, ERECT THE FENCE 10. ANY TREE ROOTS THAT ARE EXPOSED, CUT, OR TORN DURING CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SURROUNDING SOIL. (REFER ALSO TO NUMBER 9 OF THE TREE AND NATURAL AREA PROTECTION NOTES INCLUDED IN THIS PLAN SET.)
 - 11. ALL TRENCHING WITHIN THE CRITICAL ROOT ZONE OF A TREE TO BE PRESERVED WILL BE SAW CUT OR EXCAVATED BY HAND, AS APPROVED BY THE GENERAL PERMIT PROGRAM
 - 12. REFER TO ENVIRONMENTAL CRITERIA MANUAL APPENDIX P-6 FOR FURTHER REMEDIAL TREE CARE REQUIREMENTS. P-6 REMEDIAL TREE CARE WILL BE COORDINATED WITH AND APPROVED BY THE GENERAL PERMIT PROGRAM ARBORIST FOR PROJECTS PERMITTED THROUGH THE GENERAL PERMIT PROGRAM.



CITY OF AUSTIN

WATERSHED PROTECTION DEPARTMENT

RECORD COPY SIGNED

BY J. PATRICK MURPHY

TREE PROTECTION FENCE

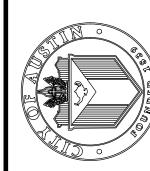
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MODIFIED TYPE A - CHAIN LINK

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RESPONSIBILITY FOR APPROPRIATE

USE OF THIS STANDARD.

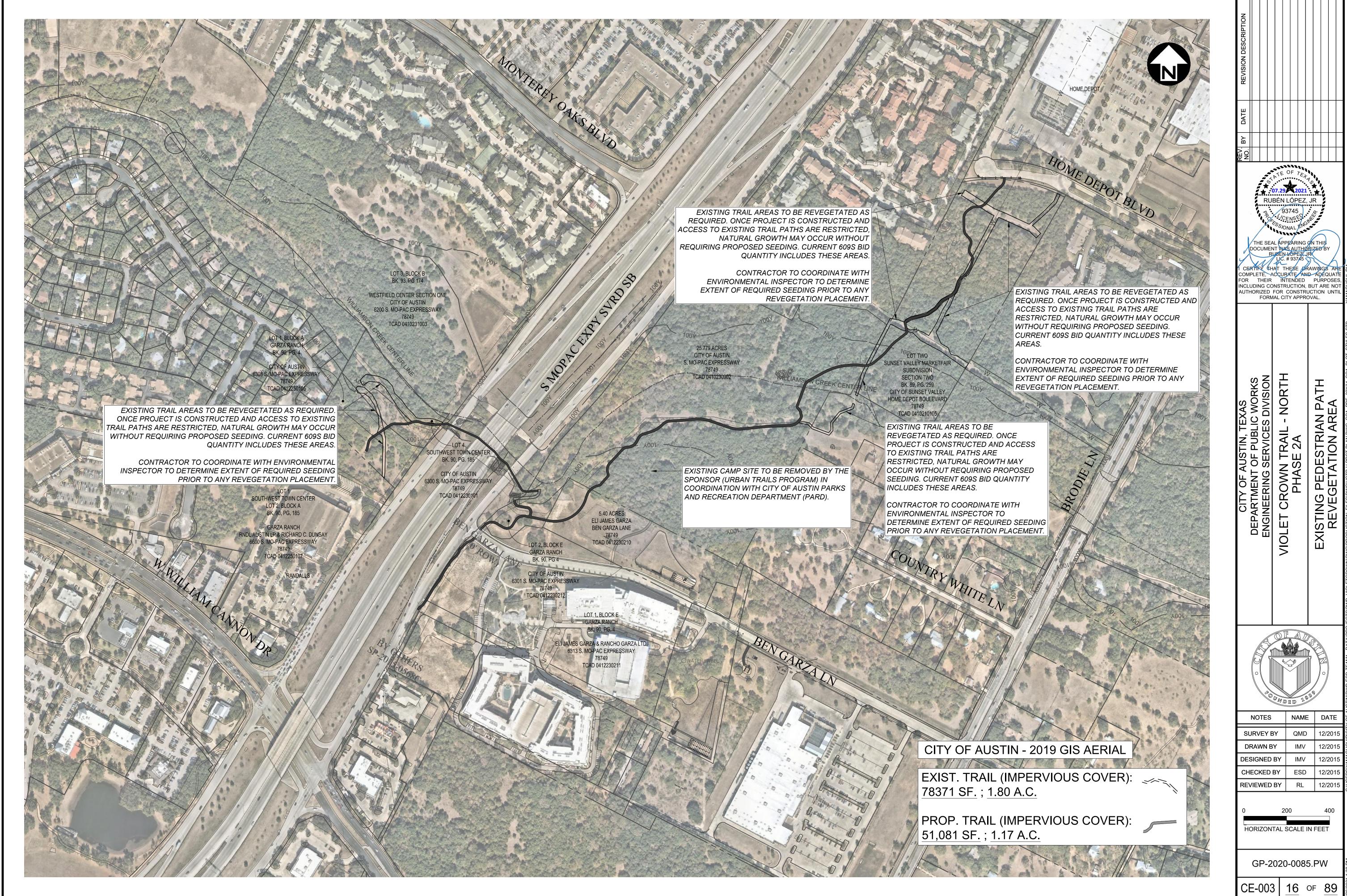


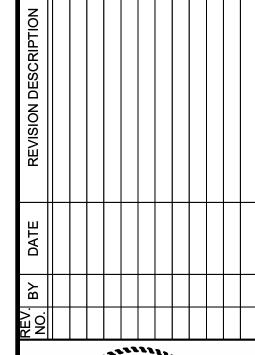


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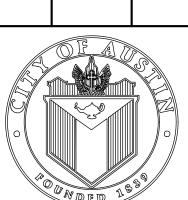
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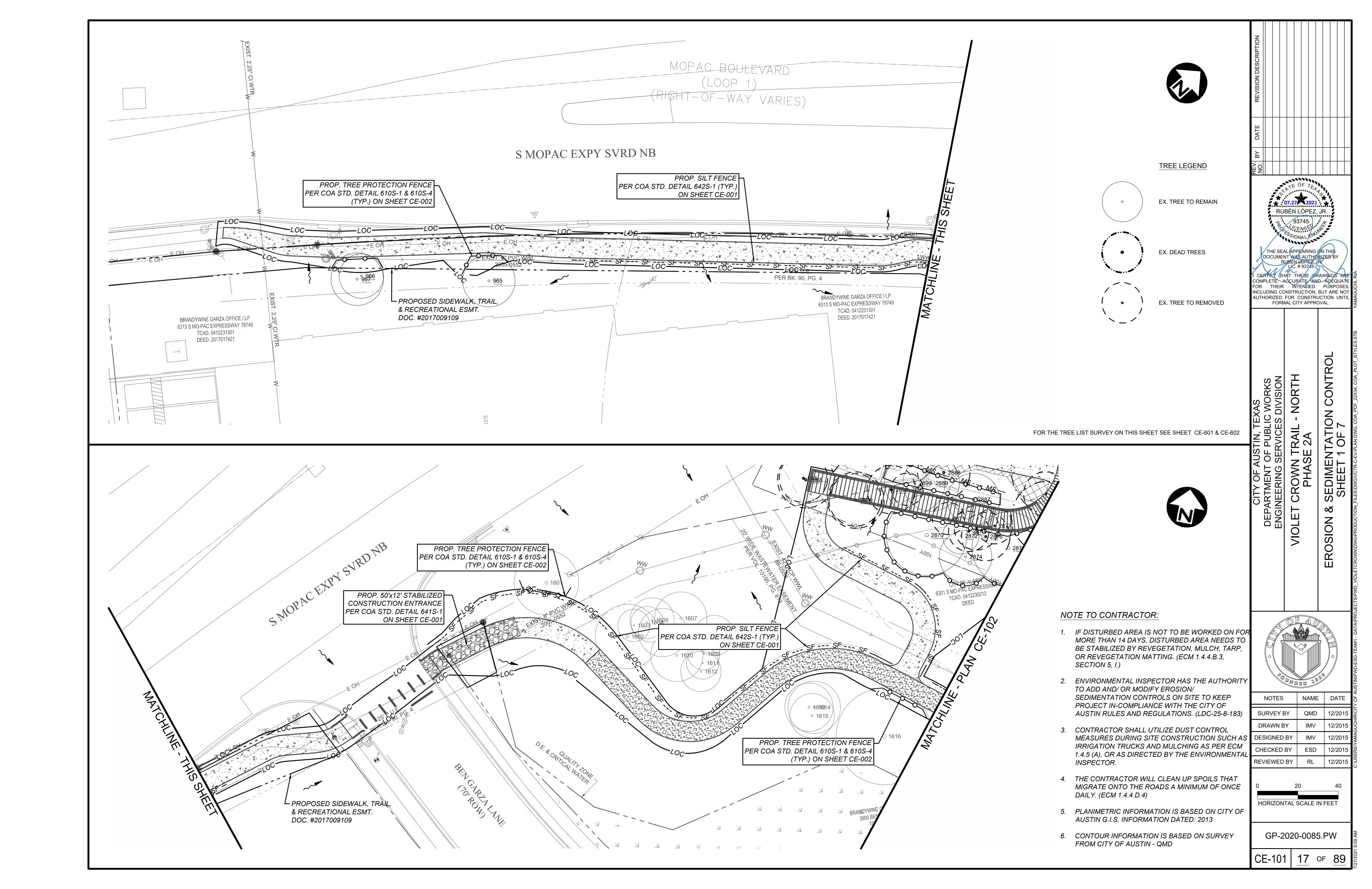


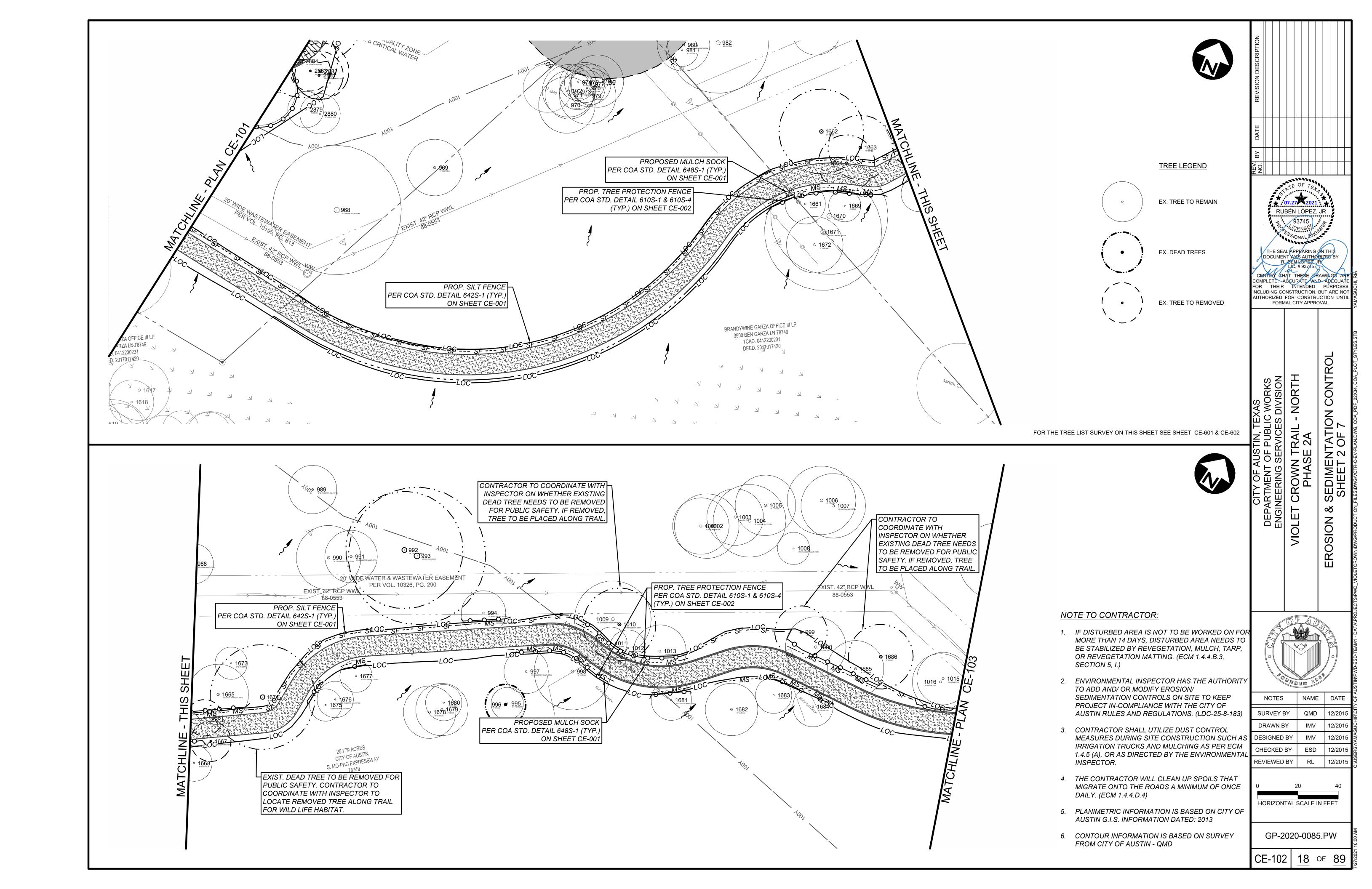
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RUSEN LOPEZ, JR
LC. # 93745 CERTIFY THAT THESE PRAWINGS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THEIR INTENDED PURPOSES,

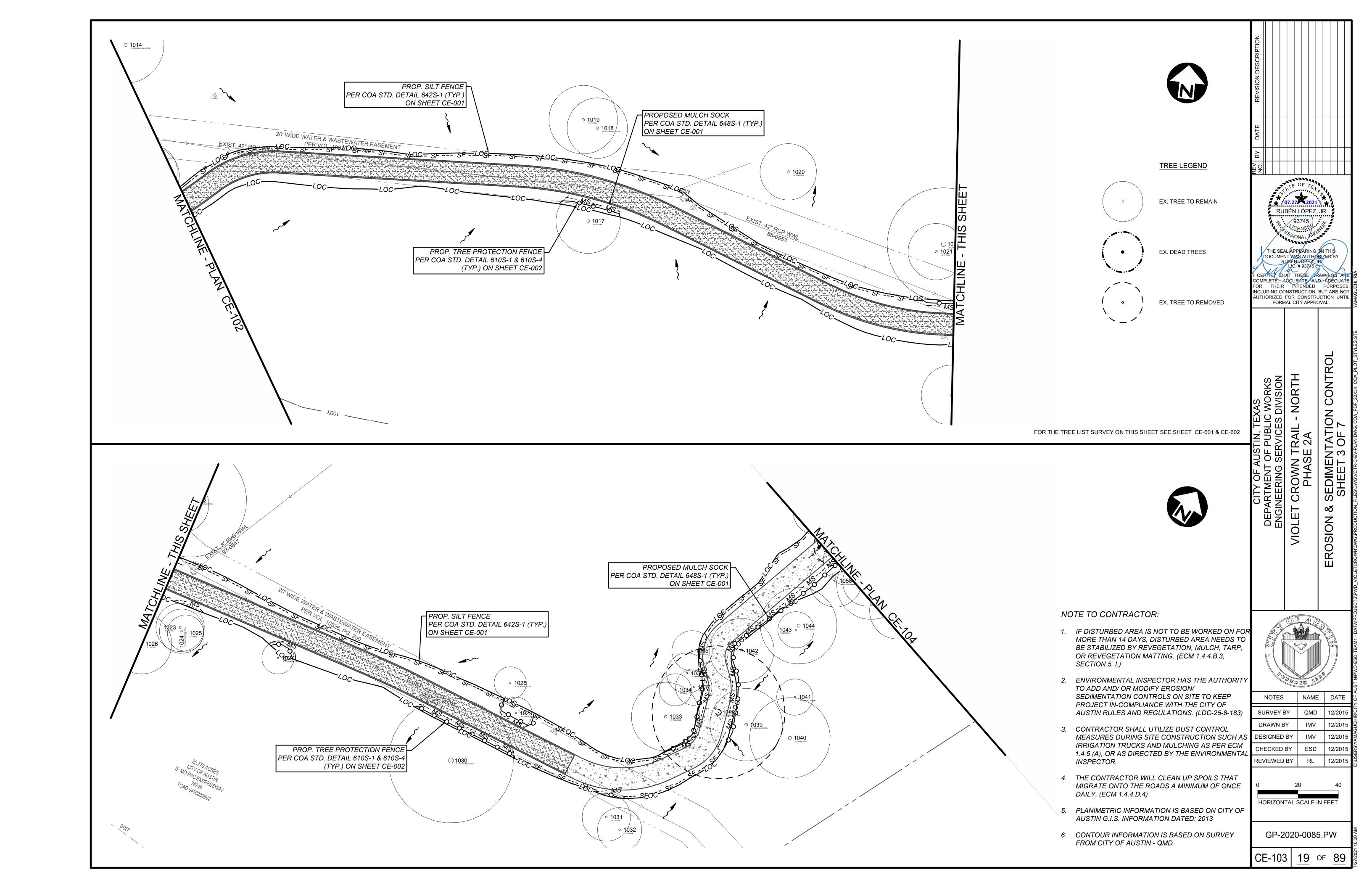
INCLUDING CONSTRUCTION, BUT ARE NOT UTHORIZED FOR CONSTRUCTION UNTIL

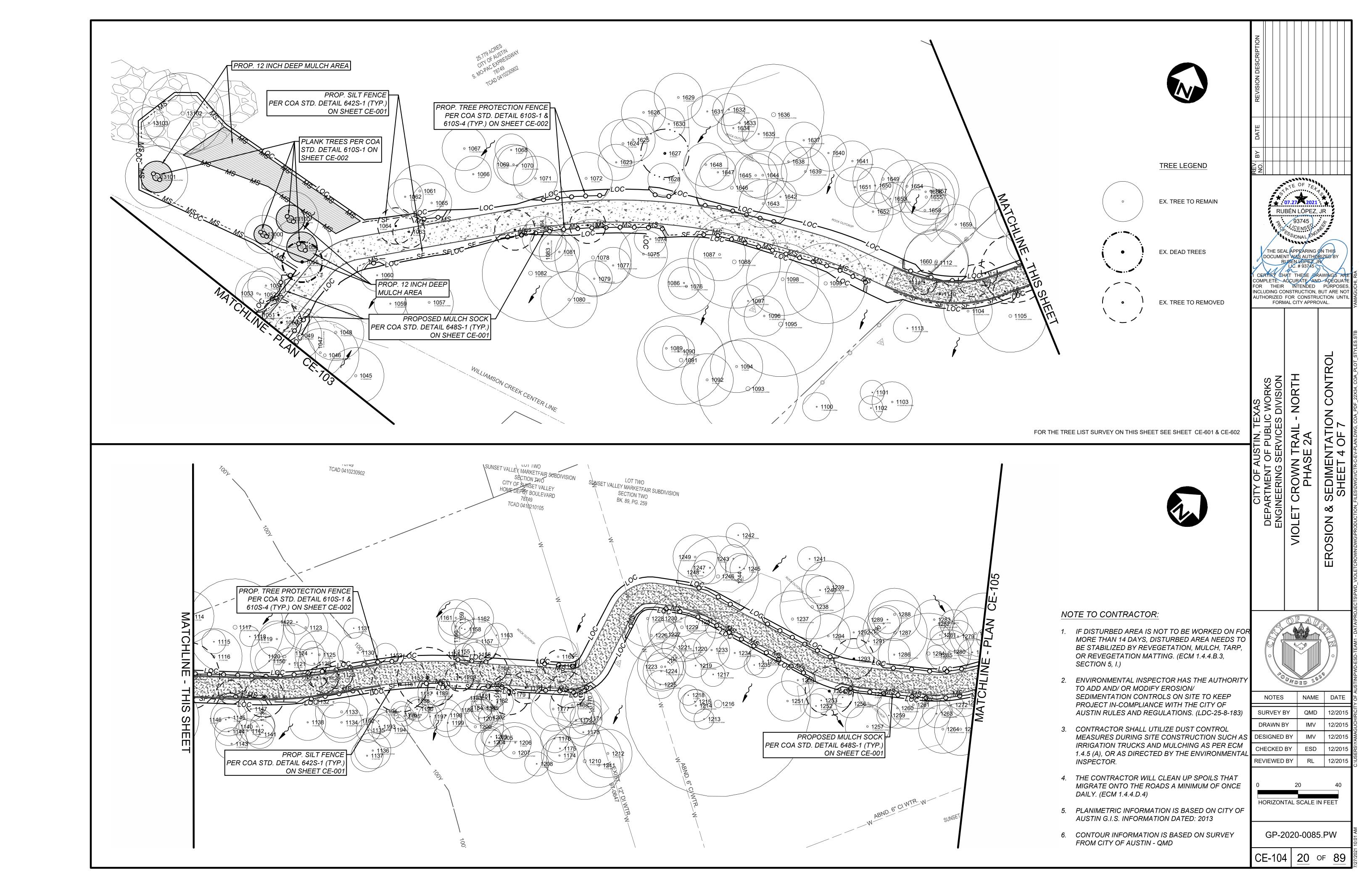


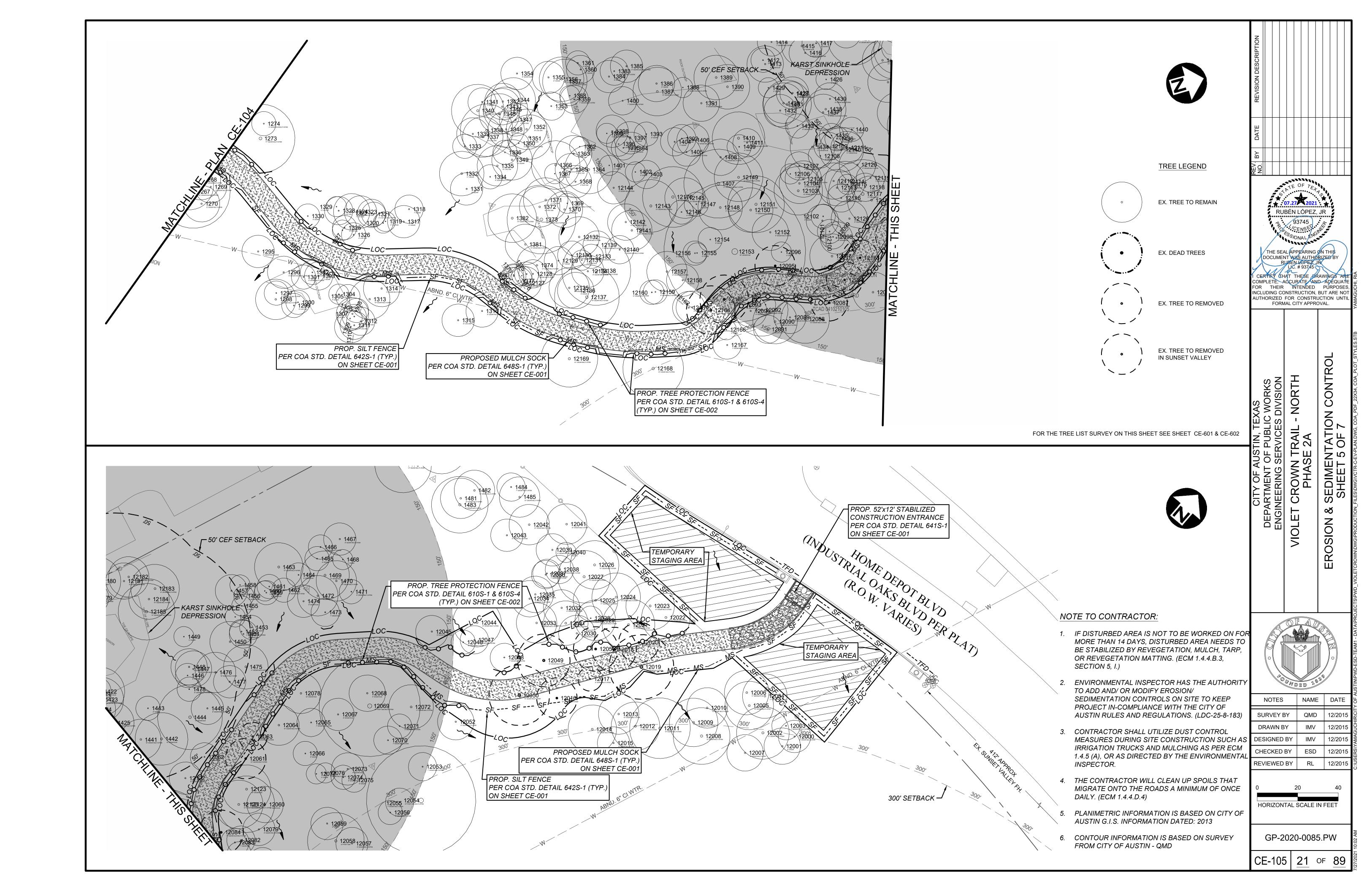
NOTES	NAME	DATE
SURVEY BY	QMD	12/2015
DRAWN BY	IMV	12/2015
DESIGNED BY	IMV	12/2015
CHECKED BY	ESD	12/2015
REVIEWED BY	RL	12/2015

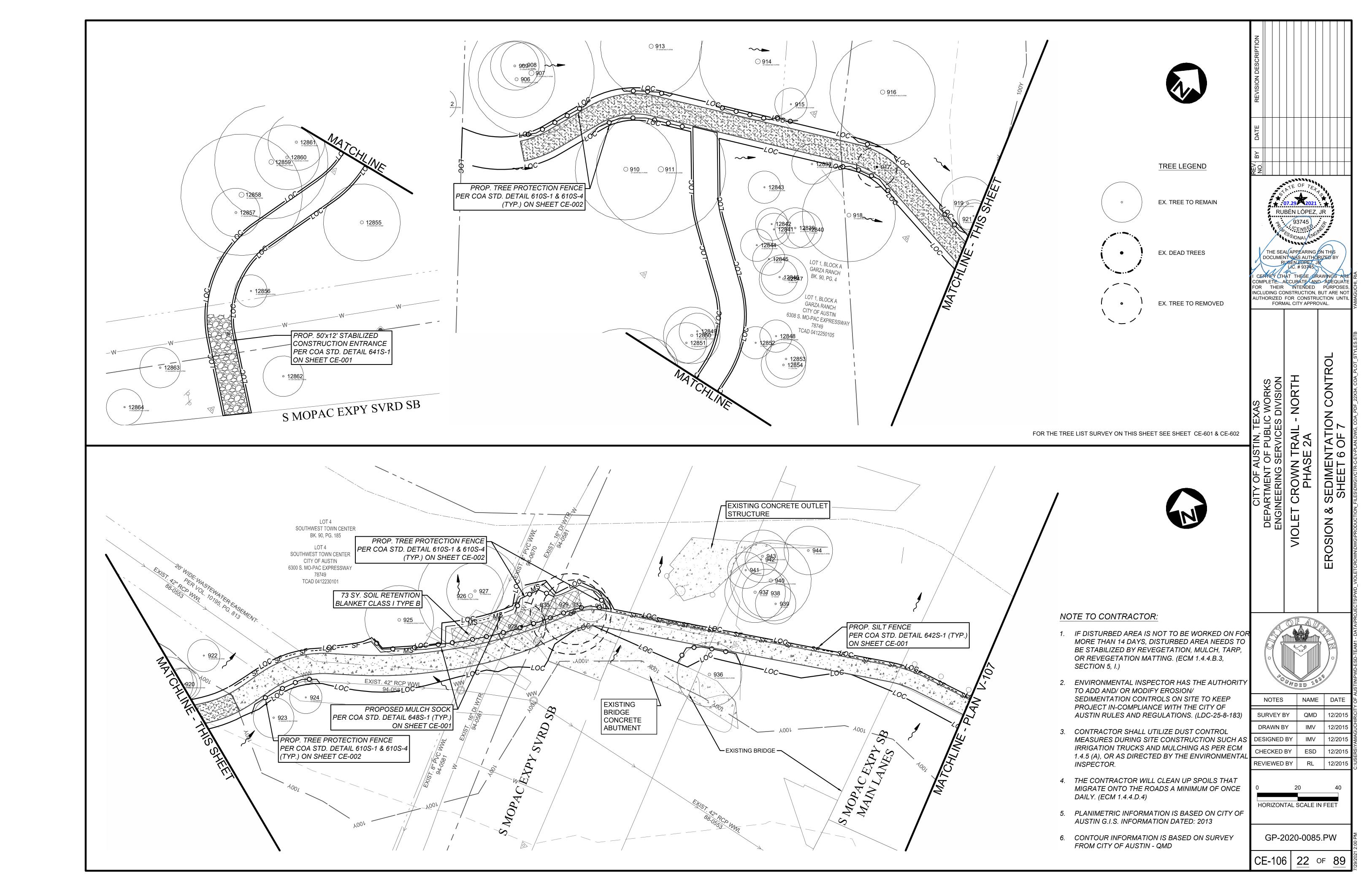


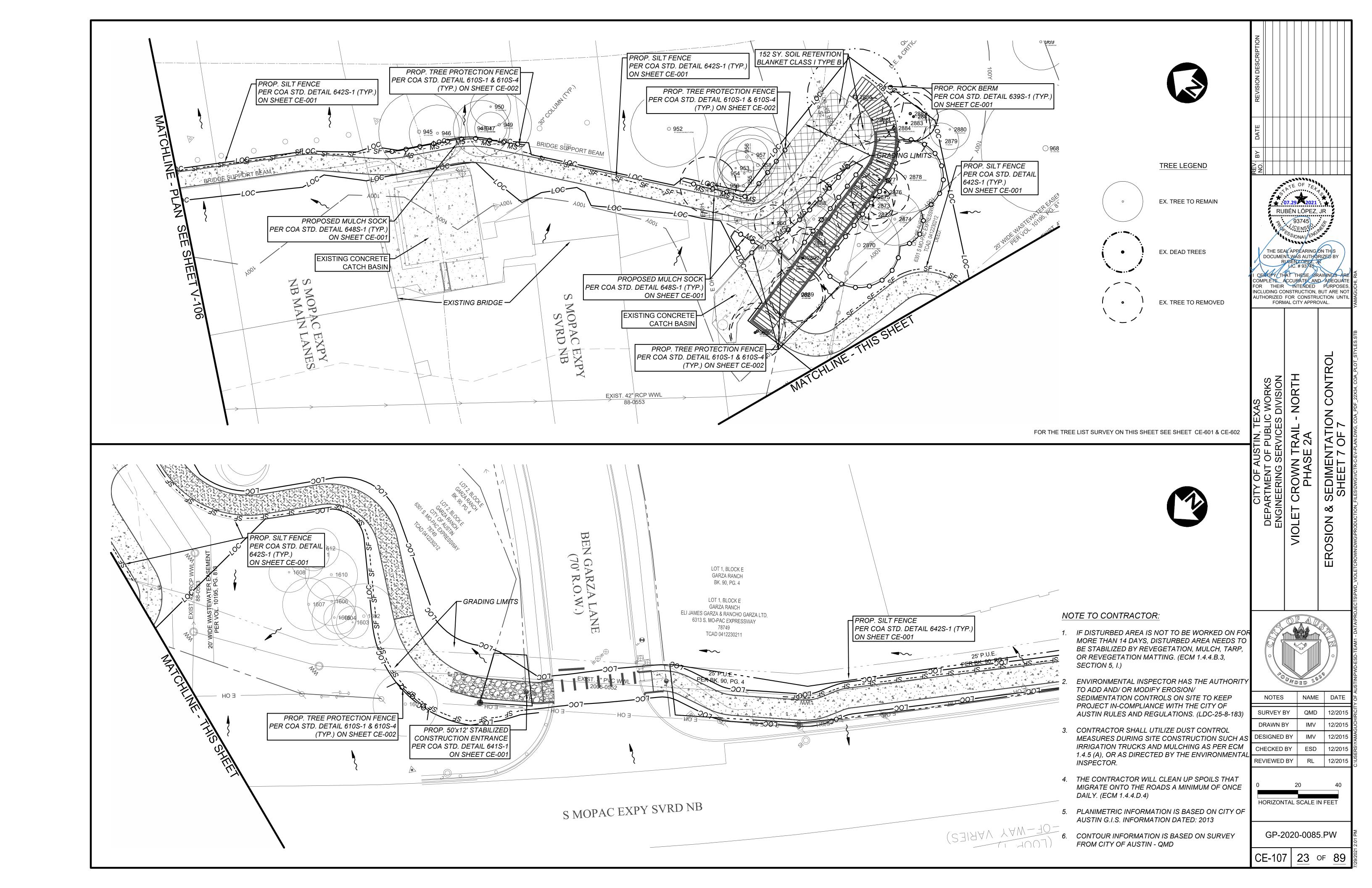






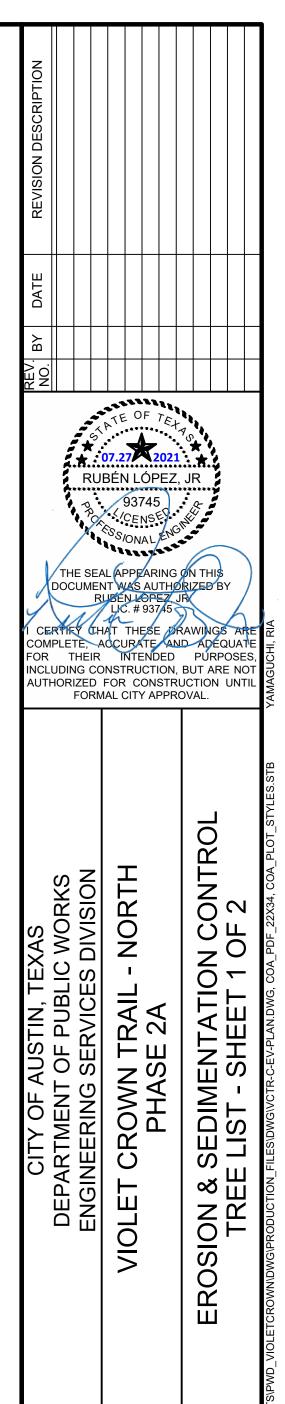


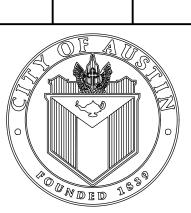




TREE SURVEY		TREE SURVEY	TREE SURVEY		TREE SURVEY		TREE SURVEY		TREE SURVEY		TREE SURVEY		TREE SURVEY		TREE SURVEY
# DESCRIPTION	#	DESCRIPTION	# DESCRIPTION	#	DESCRIPTION	#	DESCRIPTION	#	DESCRIPTION	#	DESCRIPTION	#	DESCRIPTION	#	DESCRIPTION
	937	15" CEDAR	970 14" LIVE OAK	1002	16" LIVE OAK	1034	8" CEDAR	1066	9" CEDAR	1098	18" CEDAR MULTI-STEM	1130	10" CEDAR	1162	10" CEDAR
906 19" CEDAR MULTI-STEM	938	12" CEDAR	971 12" LIVE OAK	1003	14" LIVE OAK	1035	10" CEDAR ELM	1067	11" LIVE OAK MULTI-STEM	1099	20" CEDAR MULTI-STEM	1131	5" LIVE OAK	1163	6" LIVE OAK
907 31" CEDAR MULTI-STEM	939	10" CEDAR	972 13" LIVE OAK	1004	18" LIVE OAK MULTI-STEM	1036	10" CEDAR ELM	1068	8" CEDAR	1100	7" CEDAR MULTI-STEM	1132	8" CEDAR MULTI-STEM	1164	7" CEDAR
908 11" CEDAR	940	20" LIGUSTRUM MULTI-STEM	973 9" HACKBERRY	1005	15" LIVE OAK	1037	9" CEDAR	1069	10" CEDAR ELM	1101	6" CEDAR	1133	13" CEDAR MULTI-STEM	1165	10" CEDAR
909 12" CEDAR MULTI-STEM	941	9" CHINABERRY	974 9" LIVE OAK	1006	17" LIVE OAK	1038	33" CEDAR MULTI-STEM	1070	10" CEDAR MULTI-STEM	1102	6" CEDAR	1134	10" CEDAR MULTI-STEM	1166	8" CEDAR
910 25" CEDAR MULTI-STEM	942	8" CHINABERRY	975 10" LIVE OAK	1007	16" LIVE OAK MULTI-STEM	1039	18" CEDAR MULTI-STEM	1071	11" CEDAR MULTI-STEM	1103	10" CEDAR MULTI-STEM	1135	6" LIVE OAK	1167	9" LIGUSTRUM MULTI-STEM
911 32" CEDAR MULTI-STEM	943	13" LIVE OAK MULTI-STEM	976 9" LIVE OAK	1008	8" CHINABERRY MULTI-STEM	1040	20" CHINABERRY	1072	13" LIVE OAK	1104	12" CEDAR MULTI-STEM	1136	9" LIVE OAK MULTI-STEM	1168	11" CEDAR MULTI-STEM
912 8" CEDAR MULTI-STEM	944	12" CEDAR MULTI-STEM	977 10" LIVE OAK	1009	19" CHINABERRY MULTI-STEM	1041	9" CEDAR MULTI-STEM	1073	9" CEDAR	1105	18" CEDAR MULTI-STEM	1137	8" LIVE OAK	1169	10" CEDAR
913 25" CEDAR MULTI-STEM	945	20" LIVE OAK	978 13" LIVE OAK	1010	18" (DEAD) MULTI-STEM	1042	16" CEDAR ELM	1074	8" LIVE OAK	1106	6" CEDAR MULTI-STEM	1138	9" CEDAR	1170	6" CEDAR
914 29" CEDAR MULTI-STEM	946	14" LIGUSTRUM MULTI-STEM	979 14" HACKBERRY	1011	8" LIVE OAK	1043	9" CEDAR ELM	1075	12" LIVE OAK MULTI-STEM	1107	17" CEDAR MULTI-STEM	1139	6" LIVE OAK	1171	8" CEDAR
915 8" MESQUITE MULTI-STEM	947	14" LIVE OAK	980 13" CEDAR ELM MULTI-STEM	1012	9" LIVE OAK	1044	19" CEDAR ELM	1076	14" CEDAR MULTI-STEM	1108	6" CEDAR MULTI-STEM	1140	9" CDAR ELM MULTI-STEM	1172	9" CEDAR MULTI-STEM
916 26" MESQUITE MULTI-STEM	948	8" LIVE OAK MULTI-STEM	981 8" CEDAR ELM	1013	13" CHINABERRY MULTI-STEM	1045	14" CEDAR ELM	1077	9" CEDAR ELM MULTI-STEM	1109	8" CEDAR MULTI-STEM	1141	7" LIVE OAK	1173	7" CEDAR
917 10" MESQUITE MULTI-STEM	949	16" LIVE OAK	982 25" LIVE OAK	1014	19" CEDAR ELM MULTI-STEM	1046	17" CHINABERRY MULTI-STEM	1078	19" LIVE OAK	1110	6" CEDAR	1142	6" CEDAR	1174	9" LIVE OAK
918 23" CEDAR ELM MULTI-STEM	950	10" CEDAR ELM	983 12" CEDAR	1015	13" CEDAR ELM	1047	12" CEDAR MULTI-STEM	1079	9" CEDAR MULTI-STEM	1111	6" CEDAR	1143	8" CEDAR ELM	1175	7" LIVE OAK
919 13" MESQUITE MULTI-STEM	951	14" CEDAR ELM	984 8" CEDAR	1016	14" CEDAR ELM	1048	14" CEDAR ELM	1080	14" CEDAR MULTI-STEM	1112	16" CEDAR MULTI-STEM	1144	7" LIVE OAK	1176	7" LIVE OAK
920 8" CEDAR ELM MULTI-STEM	952	19" CEDAR ELM MULTI-STEM	985 10" CHINABERRY MULTI-STEM	1017	16" LIVE OAK	1049	12" HACKBERRY	1081	10" LIVE OAK	1113	7" CEDAR MULTI-STEM	1145	9" CEDAR	1177	11" CEDAR
921 8" MESQUITE MULTI-STEM	953	9" LIVE OAK	986 8" CEDAR MULTI-STEM	1018	15" LIVE OAK MULTI-STEM	1050	10" CEDAR ELM	1082	24" CEDAR MULTI-STEM	1114	13" LIVE OAK	1146	6" CEDAR	1178	8" CEDAR MULTI-STEM
922 8" CEDAR MULTI-STEM	954	11" LIVE OAK	987 12" CEDAR MULTI-STEM	1019	17" LIVE OAK	1051	8" CEDAR ELM MULTI-STEM	1083	9" LIGUSTRUM MULTI-STEM	1115	6" CEDAR ELM	1147	6" LIVE OAK	1179	10" CEDAR MULTI-STEM
923 10" MESQUITE MULTI-STEM	955	18" LIVE OAK MULTI-STEM	988 10" CEDAR MULTI-STEM	1020	14" CEDAR ELM	1052	9" HACKBERRY	1084	10" CEDAR MULTI-STEM	1116	14" LIVE OAK	1148	10" CEDAR	1180	8" CEDAR
924 8" HACKBERRY	956	15" LIVE OAK	989 12" CHINABERRY MULTI-STEM	1021	14" LIVE OAK	1053	11" CEDAR ELM	1085	10" CEDAR	1117	24" LIVE OAK MULTI-STEM	1149	6" CEDAR MULTI-STEM	1181	6" CEDAR
925 17" CEDAR ELM MULTI-STEM	957	8" LIVE OAK	990 16" CHINABERRY MULTI-STEM	1022	28" LIVE OAK MULTI-STEM	1054	9" CEDAR ELM	1086	8" LIGUSTRUM MULTI-STEM	1118	5" CEDAR ELM	1150	7" CEDAR	1182	5" CEDAR
926 26" CHINABERRY MULTI-STEI	и 958	19" LIVE OAK MULTI-STEM	991 13" CHINABERRY MULTI-STEM	1023	12" LIVE OAK	1055	10" CEDAR ELM (DEAD)	1087	13" LIVE OAK MULTI-STEM	1119	9" LIVE OAK	1151	14" CEDAR MULTI-STEM	1183	6" CEDAR
927 14" CEDAR ELM	959	13" LIVE OAK	992 29" LIVE OAK (DEAD)	1024	11" CEDAR ELM MULTI-STEM	1056	15" CEDAR MULTI-STEM	1088	23" CEDAR MULTI-STEM	1120	17" LIVE OAK MULTI-STEM	1152	6" LIVE OAK	1184	8" LIVE OAK
928 12" CHINABERRY	960	9" CEDAR ELM	993 34" LIVE OAK (DEAD)	1025	9" CEDAR	1057	12" CEDAR MULTI-STEM	1089	11" ASH MULTI-STEM	1121	8" LIVE OAK	1153	15" CEDAR MULTI-STEM	1185	5" LIVE OAK
929 20" HACKBERRY	961	12" CEDAR ELM MULTI-STEM	994 11" MESQUITE MULTI-STEM	1026	15" LIVE OAK	1058	13" CEDAR MULTI-STEM	1090	8" CEDAR MULTI-STEM	1122	6" ASH MULTI-STEM	1154	5" LIVE OAK	1186	7" CEDAR
930 10" CHINABERRY MULTI-STE	Л 962	13" LIVE OAK	995 8" HACKBERRY	1027	8" RED OAK MULTI-STEM	1059	8" HACKBERRY	1091	22" LIVE OAK	1123	11" LIVE OAK	1155	6" CEDAR MULTI-STEM	1187	6" LIVE OAK
931 8" CHINABERRY	963	12" CEDAR ELM MULTI-STEM	996 10" (DEAD)	1028	8" CEDAR MULTI-STEM	1060	8" CEDAR	1092	13" CEDAR	1124	6" CEDAR	1156	6" LIVE OAK	1188	6" LIVE OAK
932 16" LIGUSTRUM MULTI-STEM	965	13" LIVE OAK	997 11" CHINABERRY MULTI-STEM	1029	8" CEDAR MULTI-STEM	1061	13" LIVE OAK	1093	25" CEDAR MULTI-STEM	1125	12" LIVE OAK	1157	11" CEDAR MULTI-STEM	1189	7" CEDAR MULTI-STEM
933 9" LIVE OAK	966	11" LIVE OAK	998 19" LIVE OAK	1030	31" LIVE OAK MULTI-STEM	1062	9" CEDAR	1094	13" CEDAR	1126	8" LIVE OAK	1158	5" CEDAR	1190	6" LIVE OAK
934 11" LIVE OAK	967	13" LIVE OAK	999 13" (DEAD)	1031	12" LIVE OAK	1063	8" CEDAR	1095	26" CEDAR MULTI-STEM	1127	5" LIVE OAK	1159	5" CEDAR	1191	5" LIVE OAK
935 13" LIVE OAK	968	32" LIVE OAK MULTI-STEM	1000 15" LIVE OAK	1032	11" LIVE OAK	1064	9" CEDAR	1096	10" CEDAR MULTI-STEM	1128	7" CEDAR	1160	9" CEDAR MULTI-STEM	1192	6" CEDAR
936 16" HACKBERRY MULTI-STEN	969	14" CEDAR ELM	1001 14" LIVE OAK	1022	17" CEDAR ELM	1065	10" CEDAR	1097	8" CEDAR MULTI-STEM	1120	7" CEDAR	1161	9" CEDAR MULTI-STEM	1193	6" CEDAR

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	TREE SURVEY		TREE SURVEY		TREE SURVEY		TREE SURVEY		TREE SURVEY		TREE SURVEY		TREE SURVEY		TREE SURVEY		TREE SURVEY
#	DESCRIPTION	#	DESCRIPTION	#	DESCRIPTION	#	DESCRIPTION	#	DESCRIPTION	#	DESCRIPTION	#	DESCRIPTION	#	DESCRIPTION	#	DESCRIPTION
1194	9" CEDAR MULTI-STEM	1226	13" LIVE OAK	1258	6" CEDAR	1290	8" CEDAR MULTI-STEM	1322	7" LIVE OAK	1354	8" CEDAR ELM	1386	9" CEDAR	1418	7" CEDAR MULTI-STEM	1450	10" CEDAR MULTI-STEM
1195	5" CEDAR	1227	7" CEDAR	1259	6" CEDAR MULTI-STEM	1291	6" LIVE OAK	1323	8" LIVE OAK	1355	8" CEDAR	1387	12" CEDAR MULTI-STEM	1419	7" CEDAR MULTI-STEM	1451	7" CEDAR ELM
1196	8" LVE OAK	1228	14" LIVE OAK	1260	10" CEDAR MULTI-STEM	1292	8" CEDAR	1324	9" LIVE OAK	1356	11" CEDAR MULTI-STEM	1388	5" CEDAR ELM MULTI-STEM	1420	13" CEDAR MULTI-STEM	1452	6" CEDAR ELM MULTI-STEM
1197	6" LVE OAK	1229	17" CEDAR ELM MULTI-STEM	1261	12" CEDAR MULTI-STEM	1293	10" CEDAR MULTI-STEM	1325	6" LIVE OAK	1357	11" CEDAR MULTI-STEM	1389	11" CEDAR ELM	1421	7" CEDAR ELM	1453	6" CEDAR
1198	8" CEDAR	1230	9" CEDAR MULTI-STEM	1262	5" CEDAR	1294	11" CEDAR MULTI-STEM	1326	6" LIVE OAK	1358	5" CEDAR	1390	11" CEDAR ELM	1422	12" CEDAR ELM	1454	5" CEDAR
1199	7" CEDAR MULTI-STEM	1231	6" CEDAR	1263	7" CEDAR MULTI-STEM	1295	8" CEDAR MULTI-STEM	1327	5" LIVE OAK	1359	7" CEDAR MULTI-STEM	1391	9" CEDAR MULTI-STEM	1423	11" CEDAR MULTI-STEM	1455	5" CEDAR
1200	14" CEDAR MULTI-STEM	1232	5" CEDAR	1264	12" CEDAR MULTI-STEM	1296	8" CEDAR ELM MULTI-STEM	1328	7" LIVE OAK	1360	7" CEDAR	1392	7" CEDAR	1424	10" CEDAR ELM	1456	5" CEDAR ELM
1201	7" LIVE OAK	1233	9" LIVE OAK	1265	13" CEDAR MULTI-STEM	1297	6" CEDAR ELM MULTI-STEM	1329	5" LIVE OAK	1361	6" CEDAR	1393	6" CEDAR	1425	10" CEDAR MULTI-STEM	1457	8" CEDAR MULTI-STEM
1202	5" LIVE OAK	1234	8" CEDAR MULTI-STEM	1266	12" CEDAR MULTI-STEM	1298	10" CEDAR MULTI-STEM	1330	6" CEDAR	1362	5" CEDAR ELM	1394	8" CEDAR	1426	5" CEDAR	1458	5" CEDAR
1203	5" LIVE OAK	1235	5" CEDAR	1267	18" CEDAR ELM MULTI-STEM	1299	6" LIVE OAK	1331	8" CEDAR	1363	9" LIVE OAK	1395	6" CEDAR ELM	1427	8" CEDAR ELM	1459	6" CEDAR ELM
1204	7" CEDAR	1236	8" CEDAR MULTI-STEM	1268	10" CEDAR MULTI-STEM	1300	6" LIVE OAK	1332	11" CEDAR	1364	12" LIVE OAK	1396	6" CEDAR	1428	6" CEDAR MULTI-STEM	1460	5" CEDAR ELM
1205	7" CEDAR MULTI-STEM	1237	14" CEDAR MULTI-STEM	1269	8" CEDAR MULTI-STEM	1301	6" CEDAR MULTI-STEM	1333	6" LIVE OAK	1365	8" LIVE OAK	1397	8" CEDAR	1429	5" CEDAR	1461	6" CEDAR ELM MULTI-STEM
1206	8" CEDAR	1238	16" CEDAR MULTI-STEM	1270	9" CEDAR MULTI-STEM	1302	6" CEDAR ELM	1334	6" CEDAR MULTI-STEM	1366	12" LIVE OAK MULTI-STEM	1398	8" CEDAR	1430	10" CEDAR ELM	1462	6" CEDAR MULTI-STEM
1207	15" CEDAR MULTI-STEM	1239	13" CEDAR MULTI-STEM	1271	7" CEDAR MULTI-STEM	1303	7" CEDAR	1335	10" LIVE OAK	1367	5" CEDAR ELM	1399	5" CEDAR ELM MULTI-STEM	1431	12" POST OAK	1463	12" CEDAR MULTI-STEM
1208	6" CEDAR	1240	7" CEDAR MULTI-STEM	1272	6" CEDAR MULTI-STEM	1304	5" LIVE OAK	1336	6" LIVE OAK	1368	8" BUR OAK	1400	7" CEDAR MULTI-STEM	1432	8" POST OAK	1464	6" CEDAR ELM
1209	7" CEDAR MULTI-STEM	1241	6" CEDAR	1273	17" CEDAR MULTI-STEM	1305	6" CEDAR	1337	10" LIVE OAK	1369	5" CEDAR ELM MULTI-STEM	1401	5" CEDAR	1433	6" CEDAR ELM	1465	6" CEDAR
1210	19" LIVE OAK MULTI-STEM	1242	6" CEDAR MULTI-STEM	1274	6" CEDAR ELM MULTI-STEM	1306	6" LIVE OAK	1338	13" LIVE OAK MULTI-STEM	1370	9" LIVE OAK	1402	5" CEDAR	1434	11" CEDAR ELM	1466	6" CEDAR MULTI-STEM
1211	11" LIVE OAK	1243	7" LIVE OAK	1275	16" LIVE OAK	1307	8" LIVE OAK	1339	8" CEDAR	1371	11" LIVE OAK	1403	7" CEDAR	1435	6" CEDAR ELM MULTI-STEM	1467	8" CEDAR MULTI-STEM
1212	12" LIVE OAK	1244	7" CEDAR	1276	5" LIVE OAK	1308	6" LIVE OAK	1340	13" LVE OAK MULTI-STEM	1372	10" LIVE OAK	1404	7" CEDAR	1436	6" CEDAR ELM	1468	5" CEDAR
1213	5" CEDAR MULTI-STEM	1245	7" CEDAR	1277	13" LIVE OAK	1309	6" LIVE OAK	1341	7" CEDAR	1373	17" LIVE OAK MULTI-STEM	1405	7" CEDAR MULTI-STEM	1437	9" CEDAR ELM MULTI-STEM	1469	12" CEDAR ELM
1214	8" CEDAR MULTI-STEM	1246	20" CEDAR MULTI-STEM	1278	7" LIVE OAK MULTI-STEM	1310	8" LIVE OAK	1342	9" LIVE OAK	1374	10" CEDAR MULTI-STEM	1406	8" CEDAR MULTI-STEM	1438	10" CEDAR	1470	10" CEDAR MULTI-STEM
1215	6" CEDAR	1247	8" CEDAR	1279	8" LIVE OAK MULTI-STEM	1311	7" LIVE OAK	1343	9" LIVE OAK	1375	6" LIVE OAK	1407	17" CEDAR ELM MULTI-STEM	1439	8" CEDAR MULTI-STEM	1471	6" CEDAR MULTI-STEM
1216	46" LIVE OAK	1248	6" CEDAR MULTI-STEM	1280	11" CEDAR MULTI-STEM	1312	7" LIVE OAK	1344	11" LIVE OAK	1376	5" LIVE OAK	1408	9" CEDAR MULTI-STEM	1440	6" CEDAR	1472	10" CEDAR
1217	6" CEDAR MULTI-STEM	1249	11" CEDAR MULTI-STEM	1281	5" CEDAR ELM	1313	10" CEDAR MULTI-STEM	1345	11" LIVE OAK	1377	7" LIVE OAK	1409	6" CEDAR	1441	10" CEDAR MULTI-STEM	1473	7" CEDAR ELM
1218	5" CEDAR	1250	8" CEDAR MULTI-STEM	1282	7" CEDAR ELM MULTI-STEM	1314	9" CEDAR MULTI-STEM	1346	10" LIVE OAK	1378	6" LIVE OAK	1410	13" CEDAR MULTI-STEM	1442	13" CEDAR ELM	1474	8" CEDAR ELM
1219	6" CEDAR MULTI-STEM	1251	10" CEDAR MULTI-STEM	1283	10" CEDAR ELM MULTI-STEM	1315	8" LIVE OAK	1347	8" LIVE OAK	1379	6" LIVE OAK	1411	7" CEDAR MULTI-STEM	1443	6" CEDAR	1475	11" CEDAR MULTI-STEM
1220	5" CEDAR	1252	6" CEDAR MULTI-STEM	1284	20" LIVE OAK MULTI-STEM	1316	8" CEDAR MULTI-STEM	1348	9" LIVE OAK	1380	5" LIVE OAK	1412	6" CEDAR	1444	16" CEDAR ELM	1476	10" CEDAR MULTI-STEM
1221	6" CEDAR MULTI-STEM	1253	6" CEDAR MULTI-STEM	1285	5" CEDAR MULTI-STEM	1317	8" CEDAR	1349	10" CEDAR	1381	10" CEDAR MULTI-STEM	1413	9" CEDAR ELM	1445	8" CEDAR MULTI-STEM	1477	8" CEDAR
1222	9" LIVE OAK	1254	12" CEDAR MULTI-STEM	1286	8" CEDAR ELM MULTI-STEM	1318	7" CEDAR	1350	5" CEDAR ELM MULTI-STEM	1382	12" CEDAR MULTI-STEM	1414	7" CEDAR MULTI-STEM	1446	6" CEDAR ELM	1478	6" CEDAR MULTI-STEM
1223	12" LIVE OAK	1255	5" CEDAR	1287	16" LIVE OAK	1319	5" LIVE OAK	1351	11" LVE OAK	1383	7" CEDAR MULTI-STEM	1415	10" CEDAR ELM	1447	9" CEDAR ELM MULTI-STEM	1479	14" CEDAR MULTI-STEM
1224	9" LIVE OAK MULTI-STEM	1256	7" CEDAR MULTI-STEM	1288	13" LIVE OAK	1320	5" LIVE OAK	1352	10" LVE OAK	1384	8" CEDAR	1416	8" CEDAR MULTI-STEM	1448	9" CEDAR ELM	1480	13" CEDAR MULTI-STEM
1225	7" CEDAR MULTI-STEM	1257	11" CEDAR MULTI-STEM	1289	7" CEDAR ELM MULTI-STEM	1321	6" LIVE OAK MULTI-STEM	1353	7" CEDAR	1385	8" CEDAR ELM MULTI-STEM	1417	7" CEDAR	1449	5" CEDAR	1481	10" CEDAR MULTI-STEM





EROSION & SEDIMENTATION CONTROL
TREE LIST - SHEET 1 OF 2
TCROWNIDWGNPRODUCTION_FILES\DWGNCTR-C-EV-PLAN.DWG, COA_PDF_22X34, COA_PLOT_STA

NOTES	NAME	DATE
SURVEY BY	QMD	12/2015
DRAWN BY	IMV	12/2015
DIVIVITOI	1101 0	12/2010
DESIGNED BY	IMV	12/2015
CHECKED BY	ESD	12/2015
REVIEWED BY	RL	12/2015



Engineering Services
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CE-601 <u>24</u> of <u>89</u>

	TREE SURVEY		TREE SURVEY		TREE SURVEY		TREE SURVEY		TREE SURVEY		TREE SURVEY		TREE SURVEY		TREE SURVEY		TREE SURVEY		TREE SURVEY
#	DESCRIPTION	#	DESCRIPTION	#	DESCRIPTION	#	DESCRIPTION	#	DESCRIPTION	#	DESCRIPTION	#	DESCRIPTION	#	DESCRIPTION	#	DESCRIPTION	#	DESCRIPTION
1482	10" CEDAR MULTI-STEM	1651	10" CEDAR	1683	9" CEDAR ELM	12003	7" MESQUITE MULTI-STEM	12035	9" CEDAR MULTI-STEM	12067	8" CEDAR ELM	12099	8" CEDAR ELM	12131	5" CEDAR ELM	12163	9" CEDAR MULTI-STEM	12847	12" LIVE OAK
1483	14" CEDAR MULTI-STEM	1652	10" CEDAR	1684	10" CEDAR ELM	12004	11" CEDAR MULTI-STEM	12036	7" CEDAR MULTI-STEM	12068	9" CEDAR ELM	12100	6" CEDAR ELM	12132	10" CEDAR MULTI-STEM	12164	12" CEDAR MULTI-STEM	12848	8" LIVE OAK MULTI-STEM
1484	7" CEDAR MULTI-STEM	1653	8" CEDAR MULTI-STEM	1685	14" CEDAR ELM	12005	12" CEDAR MULTI-STEM	12037	7" CEDAR MULTI-STEM	12069	25" POST OAK MULTI-STEM	12101	8" CEDAR ELM	12133	6" CEDAR ELM MULTI-STEM	12165	12" CEDAR MULTI-STEM	12849	9" CEDAR MULTI-STEM
1485	10" CEDAR MULTI-STEM	1654	13" LIVE OAK	1686	16" (DEAD)	12006	11" MESQUITE M	12038	7" CEDAR MULTI-STEM	12070	7" CEDAR MULTI-STEM	12102	6" CEDAR	12134	8" CEDAR MULTI-STEM	12166	5" CEDAR	12850	14" CEDAR MULTI-STEM
1623	9" CEDAR ELM	1655	14" LIVE OAK	2868	14" CEDAR EL	12007	9" CEDAR MULTI-STEM	12039	8" CEDAR MULTI-STEM	12071	6" CEDAR MULTI-STEM	12103	12" CEDAR MULTI-STEM	12135	10" CEDAR MULTI-STEM	12167	7" CEDAR MULTI-STEM	12851	10" CEDAR MULTI-STEM
1624	12" LIVE OAK	1656	10" CEDAR MULTI-STEM	2869	14" LIVE OAK	12008	14" CEDAR MULTI-STEM	12040	5" CEDAR	12072	11" CEDAR MULTI-STEM	12104	10" CEDAR MULTI-STEM	12136	9" CEDAR	12168	15" CEDAR MULTI-STEM	12852	8" CEDAR
1625	11" LIVE OAK	1657	14" LIVE OAK	2870	20" CEDAR MULTI-STEM	12009	12" CEDAR MULTI-STEM	12041	10" CEDAR MULTI-STEM	12073	8" CEDAR ELM	12105	9" CEDAR ELM MULTI-STEM	12137	16" CEDAR MULTI-STEM	12169	14" CEDAR MULTI-STEM	12853	10" LIVE OAK
1626	11" LIVE OAK	1658	12" CEDAR MULTI-STEM	2871	8" CEDAR ELM	12010	10" CEDAR MULTI-STEM	12042	10" CEDAR MULTI-STEM	12074	6" CEDAR ELM	12106	5" CEDAR ELM	12138	17" CEDAR MULTI-STEM	12170	15" CEDAR ELM	12854	11" LIVE OAK
1627	12" (DEAD)	1659	10" CEDAR MULTI-STEM	2872	9" CEDAR	12011	15" CEDAR MULTI-STEM	12043	8" CEDAR MULTI-STEM	12075	6" CEDAR	12107	7" CEDAR MULTI-STEM	12139	7" CEDAR ELM MULTI-STEM	12171	6" CEDAR ELM MULTI-STEM	12855	19" CEDAR MULTI-STEM
1628	8" CEDAR	1660	16" CEDAR MULTI-STEM	2873	10" CEDAR ELM	12012	12" CEDAR MULTI-STEM	12044	12" CEDAR MULTI-STEM	12076	5" CEDAR MULTI-STEM	12108	6" CEDAR ELM	12140	7" CEDAR ELM MULTI-STEM	12172	9" CEDAR ELM	12856	8" HACKBERRY MULTI-STEM
1629	12" CEDAR ELM	1661	10" CEDAR	2874	13" CEDAR	12013	10" CEDAR MULTI-STEM	12045	8" CEDAR MULTI-STEM	12077	5" CEDAR	12109	7" CEDAR ELM MULTI-STEM	12141	10" CEDAR MULTI-STEM	12173	11" CEDAR ELM MULTI-STEM	12857	12" CEDAR MULTI-STEM
1630	8" CEDAR MULTI-STEM	1662	21" (DEAD)	2875	11" CEDAR ELM	12014	12" CEDAR MULTI-STEM	12046	6" CEDAR MULTI-STEM	12078	10" CEDAR ELM	12110	11" CEDAR ELM	12142	9" CEDAR MULTI-STEM	12174	9" CEDAR ELM MULTI-STEM	12858	30" CEDAR MULTI-STEM
1631	8" CEDAR	1663	16" (DEAD)	2876	12" CEDAR	12015	8" CEDAR MULTI-STEM	12047	7" CEDAR MULTI-STEM	12079	8" CEDAR MULTI-STEM	12111	8" CEDAR ELM	12143	13" CEDAR MULTI-STEM	12175	17" CEDAR	12859	28" CEDAR MULTI-STEM
1632	8" CEDAR MULTI-STEM	1664	14" (DEAD)	2877	9" HACKBERRY	12016	10" CEDAR MULTI-STEM	12048	7" CEDAR MULTI-STEM	12080	7" CEDAR MULTI-STEM	12112	9" CEDAR ELM	12144	8" CEDAR MULTI-STEM	12176	8" CEDAR	12860	16" CEDAR MULTI-STEM
1633	9" CEDAR ELM	1665	15" CEDAR ELM MULTI-STEM	2878	18" CEDAR MULTI-STEM	12017	6" CEDAR MULTI-STEM	12049	13" CEDAR MULTI-STEM	12081	6" CEDAR ELM	12113	9" CEDAR ELM MULTI-STEM	12145	10" CEDAR MULTI-STEM	12177	11" CEDAR MULTI-STEM	12861	14" CEDAR MULTI-STEM
1634	8" CEDAR MULTI-STEM	1666	9" CEDAR MULTI-STEM	2879	9" CEDAR	12018	11" CEDAR MULTI-STEM	12050	15" CEDAR MULTI-STEM	12082	7" CEDAR ELM	12114	10" CEDAR ELM	12146	6" CEDAR	12178	5" CEDAR ELM	12862	10" LIVE OAK MULTI-STEM
1635	8" CEDAR MULTI-STEM	1667	10" CEDAR MULTI-STEM	2880	10" CEDAR ELM	12019	16" CEDAR MULTI-STEM	12051	11" CEDAR MULTI-STEM	12083	7" CEDAR ELM	12115	5" CEDAR ELM	12147	6" CEDAR	12179	8" CEDAR MULTI-STEM	12863	10" HACKBERRY MULTI-STE
1636	25" LIVE OAK MULTI-STEM	1668	9" CEDAR ELM	2881	12" LIGUSTRUM MULTI-STEM	12020	10" CEDAR MULTI-STEM	12052	9" CEDAR MULTI-STEM	12084	11" CEDAR ELM MULTI-STEM	12116	7" CEDAR MULTI-STEM	12148	11" CEDAR MULTI-STEM	12180	12" CEDAR	12864	9" HACKBERRY MULTI-STEN
1637	9" CEDAR MULTI-STEM	1669	8" CEDAR	2882	14" CEDAR ELM	12021	13" CEDAR MULTI-STEM	12053	7" CEDAR MULTI-STEM	12085	10" CEDAR MULTI-STEM	12117	17" CEDAR ELM	12149	12" CEDAR MULTI-STEM	12181	9" CEDAR MULTI-STEM	12865	15" POST OAK
1638	10" CEDAR MULTI-STEM	1670	29" LIVE OAK	2883	10" CEDAR MULTI-STEM	12022	12" CEDAR MULTI-STEM	12054	27" POST OAK MULTI-STEM	12086	9" CEDAR MULTI-STEM	12118	7" CEDAR ELM	12150	11" CEDAR MULTI-STEM	12182	2 10" CEDAR ELM MULTI-STEM	12866	14" POST OAK
1639	12" CEDAR MULTI-STEM	1671	29" LIVE OAK MULTI-STEM	2884	18" CEDAR ELM (DEAD)	12023	12" CEDAR MULTI-STEM	12055	7" CEDAR MULTI-STEM	12087	9" CEDAR MULTI-STEM	12119	7" CEDAR MULTI-STEM	12151	14" CEDAR MULTI-STEM	12183	12" CEDAR MULTI-STEM	12867	9" POST OAK
1640	9" CEDAR	1672	14" LIVE OAK	2885	11" CEDAR ELM	12024	12" CEDAR MULTI-STEM	12056	6" CEDAR MULTI-STEM	12088	12" CEDAR MULTI-STEM	12120	9" CEDAR MULTI-STEM	12152	9" CEDAR MULTI-STEM	12184	10" CEDAR MULTI-STEM	_	
1641	10" CEDAR MULTI-STEM	1673	8" CHINABERRY	2886	24" CEDAR ELM (DEAD)	12025	11" CEDAR MULTI-STEM	12057	8" CEDAR MULTI-STEM	12089	8" CEDAR ELM MULTI-STEM	12121	12" CEDAR MULTI-STEM	12153	35" CEDAR ELM	12185	14" CEDAR ELM MULTI-STEM		
1642	8" CEDAR MULTI-STEM	1674	26" (DEAD)	2887	13" CEDAR ELM	12026	12" CEDAR MULTI-STEM	12058	14" POST OAK	12090	11" CEDAR MULTI-STEM	12122	8" CEDAR MULTI-STEM	12154	6" CEDAR	12838	10" CEDAR MULTI-STEM		
1643	12" CEDAR MULTI-STEM	1675	8" LIGUSTRUM MULTI-STEM	2888	13" CEDAR ELM	12027	13" CEDAR MULTI-STEM	12059	8" CEDAR	12091	7" CEDAR ELM	12123	12" CEDAR ELM	12155	5" CEDAR	12839	10" LIVE OAK		
1644	12" CEDAR MULTI-STEM	1676	9" CHINABERRY MULTI-STEM	2889	14" CEDAR ELM	12028	6" CEDAR	12060	9" CEDAR ELM	12092	13" CEDAR MULTI-STEM	12124	14" CEDAR ELM MULTI-STEM	12156	6" CEDAR	12840	9" LIVE OAK		
1645	11" LIGUSTRUM MULTI-STEM	1677	8" LIVE OAK MULTI-STEM	2890	15" CEDAR ELM	12029	10" CEDAR MULTI-STEM	12061	10" CEDAR MULTI-STEM	12093	5" CEDAR ELM		12" CEDAR MULTI-STEM	-	10" CEDAR MULTI-STEM		8" CEDAR MULTI-STEM		
						140000	OU OEDAD MUUTI OTEM	40000	7" CEDAR ELM	140004	O" CEDAR ELM	12426	O" CEDAD ELM MULTI STEM	10150	O" CEDAD	12042	O" OF DAD MULTI STEM	I	

12094 8" CEDAR ELM

12098 6" CEDAR ELM

12096 5" CEDAR

12095 10" CEDAR MULTI-STEM

12097 11" CEDAR MULTI-STEM

12062 7" CEDAR ELM

12066 6" CEDAR

12063 7" CEDAR MULTI-STEM

12064 10" CEDAR MULTI-STEM

12065 7" CEDAR MULTI-STEM

TR	EE REMOVAL	
NUMBER	DESCRIPTION	
917	10" MESQUITE MULTI-STEM	ıſ
928	12" CHINABERRY	ı
929	20" HACKBERRY	ıſ
932	16" LIGUSTRUM MULTI-STEM	
951	14" CEDAR ELM	
960	9" CEDAR ELM	
962	13" LIVE OAK	
963	12" CEDAR ELM MULTI-STEM	
1038	33" CEDAR MULTI-STEM	
1050	10" CEDAR ELM	
1051	8" CEDAR ELM MULTI-STEM	
1063	8" CEDAR	
1064	9" CEDAR	
1073	9" CEDAR	
1085	10" CEDAR	
1664	14" (DEAD)	
1666	9" CEDAR MULTI-STEM	
1667	10" CEDAR MULTI-STEM	
1674	26" (DEAD)	
2868	14" CEDAR EL	
2869	14" LIVE OAK	
2871	8" CEDAR ELM	
2873	10" CEDAR ELM	
2875	11" CEDAR ELM	
2876	12" CEDAR	
2877	9" HACKBERRY	
2881	12" LIGUSTRUM MULTI-STEM	
2882	14" CEDAR ELM	
2883	10" CEDAR MULTI-STEM	
2884	18" CEDAR ELM (DEAD)	

1646 18" CEDAR MULTI-STEM

1648 11" LIVE OAK MULTI-STEM

1649 15" CEDAR MULTI-STEM

1647 9" CEDAR

1650 9" CEDAR

1678 13" LIVE OAK

9" LIVE OAK

13" LIVE OAK

1681 10" CEDAR ELM MULTI-STEM

1679 13" CEDAR

TR	EE REMOVAL
NUMBER	DESCRIPTION
2885	11" CEDAR ELM
2888	13" CEDAR ELM
2891	8" LIGUSTRUM MULTI-STEM
2892	12" CEDAR ELM
12086	9" CEDAR MULTI-STEM

8" LIGUSTRUM MULTI-STEM

2892 12" CEDAR ELM

12001 9" CEDAR

12000 8" CEDAR MULTI-STEM

12002 13" CEDAR MULTI-STEM

TREE REM	OVAL - SUNSET VALLEY
NUMBER	DESCRIPTION
1106	6" CEDAR MULTI-STEM
1107	17" CEDAR MULTI-STEM
1108	6" CEDAR MULTI-STEM
1109	8" CEDAR MULTI-STEM
1110	6" CEDAR
1111	6" CEDAR
1127	5" LIVE OAK
1128	7" CEDAR
1129	7" CEDAR
1148	10" CEDAR
1149	6" CEDAR MULTI-STEM
1151	14" CEDAR MULTI-STEM
1153	15" CEDAR MULTI-STEM
1164	7" CEDAR
1166	8" CEDAR
1167	9" LIGUSTRUM MULTI-STEM
1178	8" CEDAR MULTI-STEM
1179	10" CEDAR MULTI-STEM
1209	7" CEDAR MULTI-STEM
1254	12" CEDAR MULTI-STEM
1293	10" CEDAR MULTI-STEM
12016	10" CEDAR MULTI-STEM
12017	6" CEDAR MULTI-STEM
12018	11" CEDAR MULTI-STEM
12019	16" CEDAR MULTI-STEM
12020	10" CEDAR MULTI-STEM
12049	13" CEDAR MULTI-STEM
12050	15" CEDAR MULTI-STEM
12051	11" CEDAR MULTI-STEM
12061	10" CEDAR MULTI-STEM

12030 9" CEDAR MULTI-STEM

12031 11" CEDAR MULTI-STEM

12032 9" CEDAR MULTI-STEM

12033 10" CEDAR MULTI-STEM

12034 9" CEDAR MULTI-STEM

L - SUNSET VALLEY	TREE REM	IOVAL - SUNSET VALLEY			TREE SURVEY
SCRIPTION	NUMBER	DESCRIPTION		#	DESCRIPTION
CEDAR MULTI-STEM	12063	7" CEDAR MULTI-STEM		1601	16" LIVE OAK
CEDAR MULTI-STEM	12084	11" CEDAR ELM MULTI-STEM		1602	16" LIVE OAK
CEDAR MULTI-STEM	12087	9" CEDAR MULTI-STEM		1603	8" CEDAR ELM
CEDAR MULTI-STEM	12095	10" CEDAR MULTI-STEM		1604	8" CEDAR ELM
CEDAR	12163	9" CEDAR MULTI-STEM		1605	11" CEDAR ELM
CEDAR	12164	12" CEDAR MULTI-STEM		1606	12" CEDAR ELM MULTI-ST
IVE OAK	12165	12" CEDAR MULTI-STEM		1607	13" CEDAR
CEDAR			1	1608	10" CEDAR ELM MULTI-ST
CEDAR	1			1609	8" LIVE OAK
CEDAR				1610	13" CEDAR ELM MULTI-ST
CEDAR MULTI-STEM	1			1611	8" LIVE OAK
CEDAR MULTI-STEM	1			1612	10" LIVE OAK
CEDAR MULTI-STEM	1			1613	12" LIVE OAK
EDAR	1			1614	13" LIVE OAK
EDAR	1			1615	11" LIVE OAK
IGUSTRUM MULTI-STEM	1			1616	24" LIVE OAK MULTI-STEN
EDAR MULTI-STEM	1			1617	15" CEDAR ELM
CEDAR MULTI-STEM	1			1618	11" CEDAR ELM
EDAR MULTI-STEM	1			1619	10" LIVE OAK
CEDAR MULTI-STEM	1			1620	11" LIVE OAK
CEDAR MULTI-STEM	1			1621	20" LIVE OAK
CEDAR MULTI-STEM	1			1622	19" LIVE OAK MULTI-STEN
CEDAR MULTI-STEM	1			1623	12" LIVE OAK
CEDAR MULTI-STEM	1			1624	11" CEDAR ELM
CEDAR MULTI-STEM	1			1625	11" CEDAR ELM
CEDAR MULTI-STEM	1			1626	9" LIVE OAK
CEDAR MULTI-STEM]			1627	11" CEDAR ELM
CEDAR MULTI-STEM]			1628	15" LIVE OAK MULTI-STEN
CEDAR MULTI-STEM				1629	9" LIVE OAK
OFDAD MUUTI OTEM	1			4000	44" 1 1 / 5 0 1 / 5 4 1 T 0 T 5

	TREE SURVEY		TREE SURVEY
#	DESCRIPTION	#	DESCRIPTION
1601	16" LIVE OAK	1631	9" LIVE OAK
1602	16" LIVE OAK	1632	10" CEDAR ELM MULTI-STEM
1603	8" CEDAR ELM	1633	8" CEDAR ELM
1604	8" CEDAR ELM	1634	10" CEDAR ELM MULTI-STEM
1605	11" CEDAR ELM	1635	12" CEDAR ELM
1606	12" CEDAR ELM MULTI-STEM	1636	8" CEDAR ELM
1607	13" CEDAR	1637	13" CEDAR ELM
1608	10" CEDAR ELM MULTI-STEM	1638	11" LIVE OAK
1609	8" LIVE OAK	1639	11" LIVE OAK
1610	13" CEDAR ELM MULTI-STEM	1640	8" LIVE OAK
1611	8" LIVE OAK	1641	13" LIVE OAK
1612	10" LIVE OAK	1642	9" LIVE OAK
1613	12" LIVE OAK	1643	13" LIVE OAK
1614	13" LIVE OAK	1644	15" LIVE OAK MULTI-STEM
1615	11" LIVE OAK	1645	8" LIVE OAK
1616	24" LIVE OAK MULTI-STEM	1646	8" LIVE OAK
1617	15" CEDAR ELM	1647	12" LIVE OAK
1618	11" CEDAR ELM	1648	12" CEDAR ELM
1619	10" LIVE OAK		
1620	11" LIVE OAK		
1621	20" LIVE OAK		
1622	19" LIVE OAK MULTI-STEM		
1623	12" LIVE OAK		
1624	11" CEDAR ELM		
1625	11" CEDAR ELM		
1626	9" LIVE OAK		
1627	11" CEDAR ELM		
1628	15" LIVE OAK MULTI-STEM		
1629	9" LIVE OAK		
1630	11" LIVE OAK MULTI-STEM		

12158 8" CEDAR

12159 6" CEDAR MULTI-STEM

12160 6" CEDAR MULTI-STEM

12161 8" CEDAR ELM

12162 8" CEDAR ELM

12842 8" CEDAR MULTI-STEM

12843 8" CEDAR MULTI-STEM

12844 8" CEDAR MULTI-STEM

12845 8" LIVE OAK

12846 9" LIVE OAK

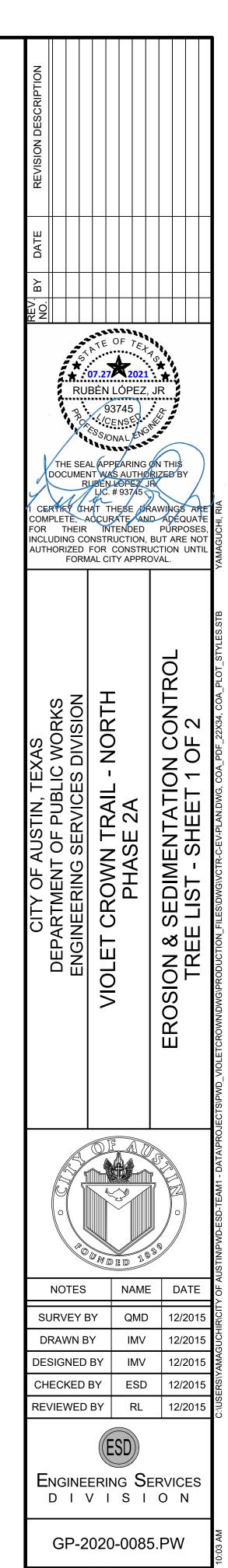
12126 9" CEDAR ELM MULTI-STEM

12130 7" CEDAR ELM MULTI-STEM

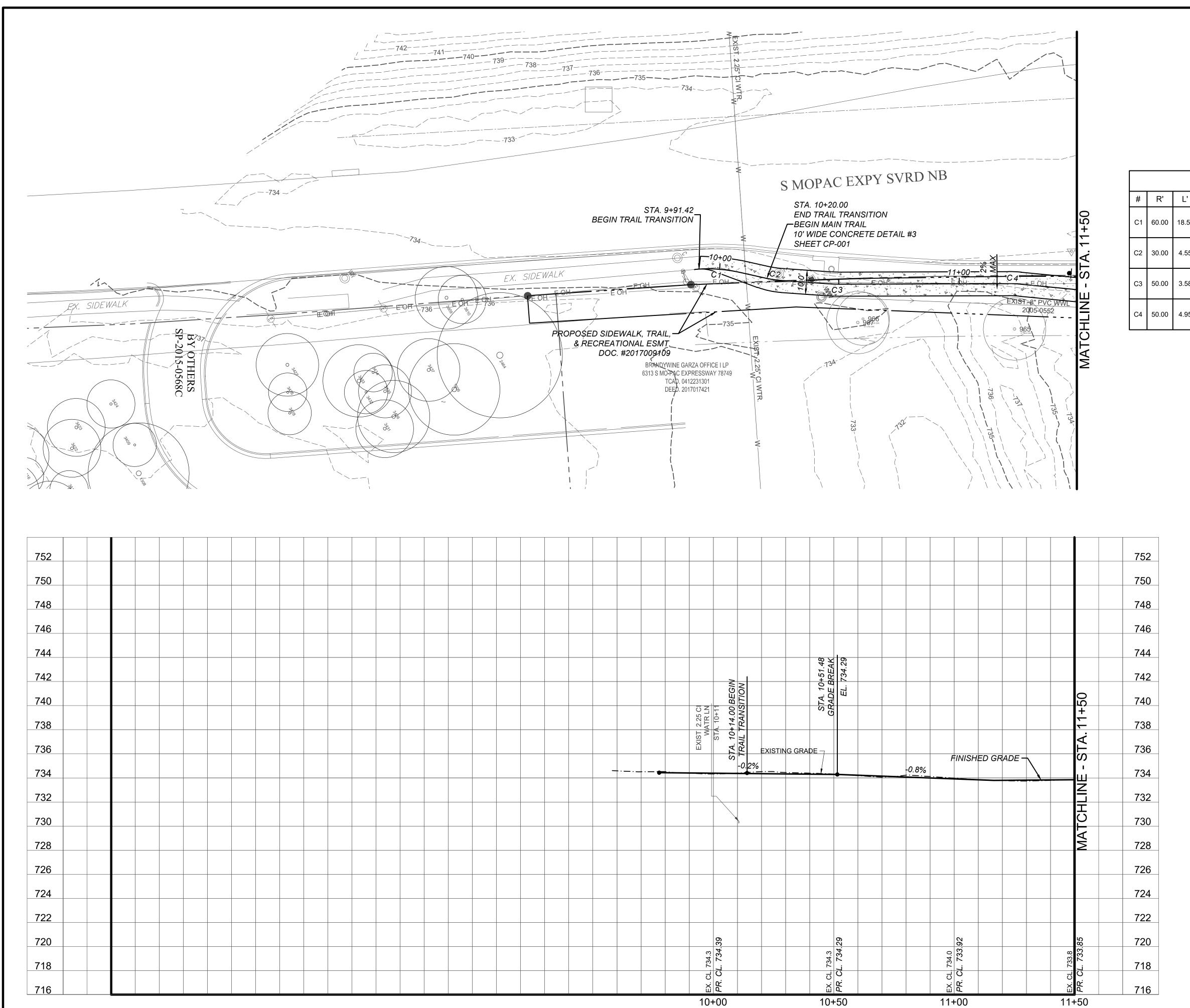
12128 7" CEDAR MULTI-STEM

12127 8" LIVE OAK

12129 7" CEDAR

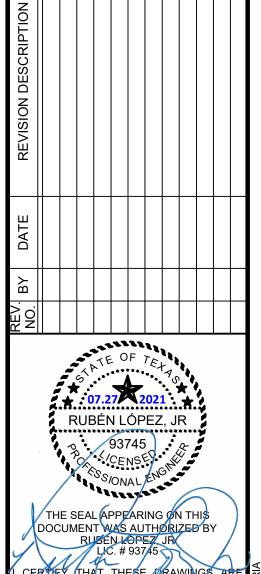


CE-602 25 OF 89





			CURVE	DATA	
#	R'	L'	DIRECTION	START PT.	END PT.
C1	60.00	18.51	N35° 34' 14"E	STA. 9+89.88 N. 10053257.00 E. 3085687.10	STA. 10+08.39 N. 10053271.99 E. 3085697.83
C2	30.00	4.55	N40° 03' 50"E	STA. 10+20.59 N. 10053280.71 E. 3085706.36	STA. 10+25.14 N. 10053284.19 E. 3085709.29
C3	50.00	3.58	N33° 39' 57"E	STA. 10+46.17 N. 10053301.26 E. 3085721.56	STA. 10+49.75 N. 10053304.24 E. 3085723.55
C4	50.00	4.95	N34° 26' 50"E	STA. 11+20.44 N. 10053364.45 E. 3085760.61	STA. 11+25.39 N. 10053368.53 E. 3085763.40



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LIC. # 93745

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CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
VIOLET CROWN TRAIL - NORTH
PHASE 2A

MAIN TRAIL PLAN & PROFILE
BEGIN - STA, 11+50

BEGIN - STA, 11+50

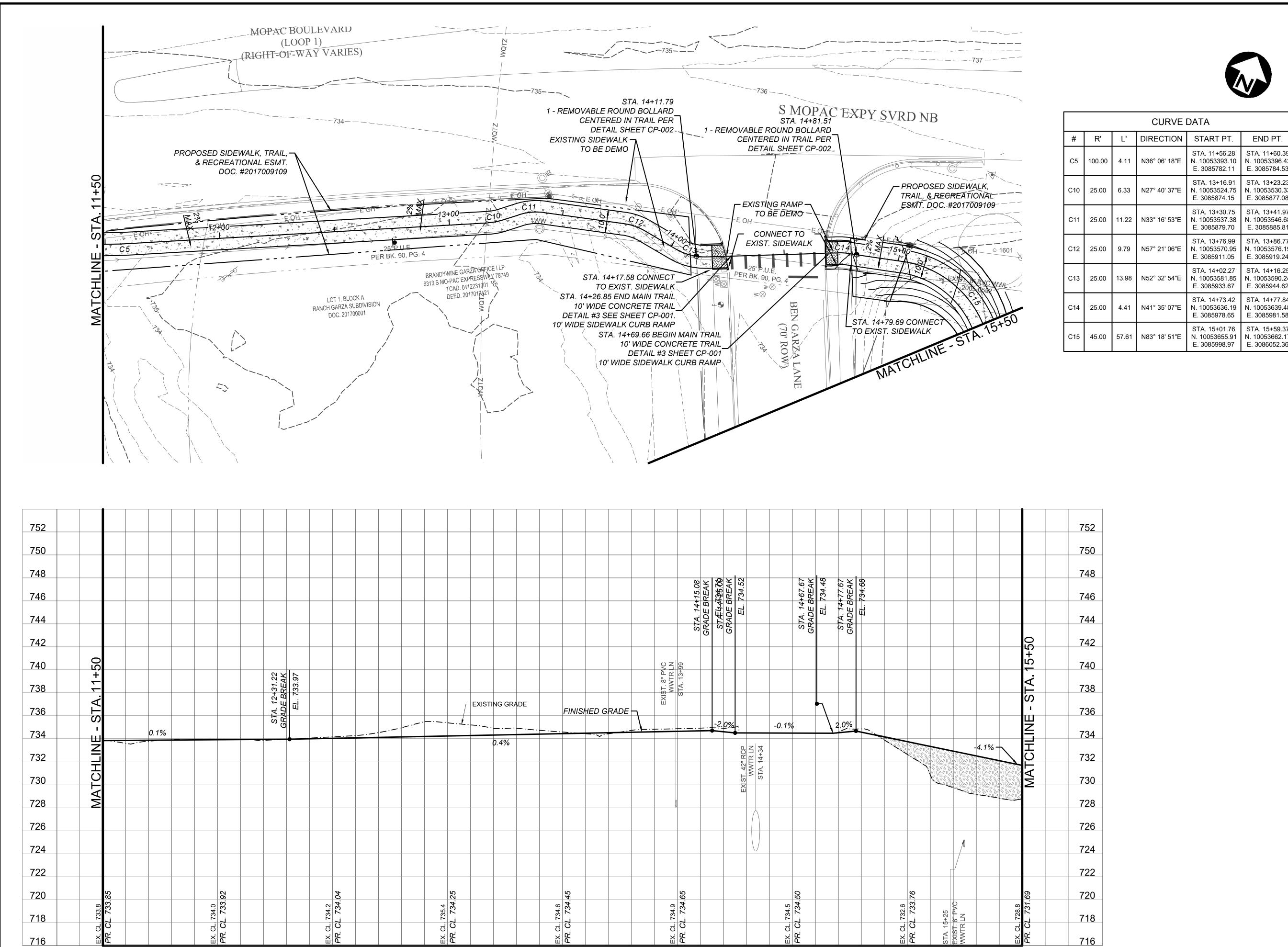


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NOTES	NAME	DATE	P
SURVEY BY	QMD	12/2015	C:\USERS\YAMAGUCHIR\CITY
DRAWN BY	IMV	12/2015	BUCH
ESIGNED BY	IMV	12/2015	AMAC
CHECKED BY	ESD	12/2015	ERS\\
EVIEWED BY	RL	12/2015	C:\US
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0 20 40
HORIZONTAL SCALE IN FEET
0 4 8
VERTICAL SCALE IN FEET

GP-2020-0085.PW

CP-201 <u>26</u> of <u>89</u>



12+00

11+50

12+50

13+00

13+50

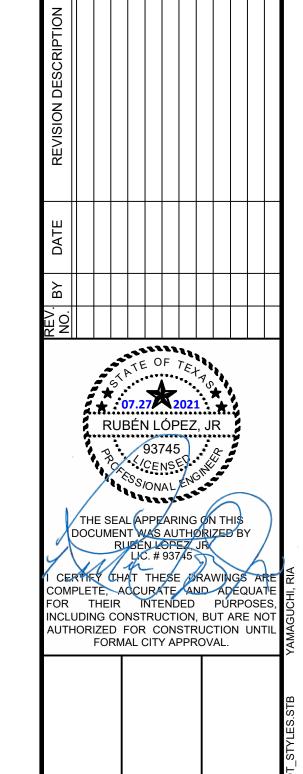
14+00

15+00

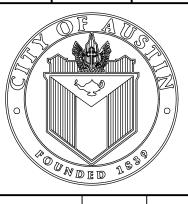
14+50

15+50

			CURVE	DATA	
#	R'	L'	DIRECTION	START PT.	END PT.
C5	100.00	4.11	N36° 06' 18"E	STA. 11+56.28 N. 10053393.10 E. 3085782.11	STA. 11+60.39 N. 10053396.42 E. 3085784.53
C10	25.00	6.33	N27° 40' 37"E	STA. 13+16.91 N. 10053524.75 E. 3085874.15	STA. 13+23.23 N. 10053530.33 E. 3085877.08
C11	25.00	11.22	N33° 16' 53"E	STA. 13+30.75 N. 10053537.38 E. 3085879.70	STA. 13+41.97 N. 10053546.68 E. 3085885.81
C12	25.00	9.79	N57° 21' 06"E	STA. 13+76.99 N. 10053570.95 E. 3085911.05	STA. 13+86.77 N. 10053576.19 E. 3085919.24
C13	25.00	13.98	N52° 32' 54"E	STA. 14+02.27 N. 10053581.85 E. 3085933.67	STA. 14+16.25 N. 10053590.24 E. 3085944.62
C14	25.00	4.41	N41° 35' 07"E	STA. 14+73.42 N. 10053636.19 E. 3085978.65	STA. 14+77.84 N. 10053639.48 E. 3085981.58
C15	45.00	57.61	N83° 18' 51"E	STA. 15+01.76 N. 10053655.91 E. 3085998.97	STA. 15+59.37 N. 10053662.17 E. 3086052.36



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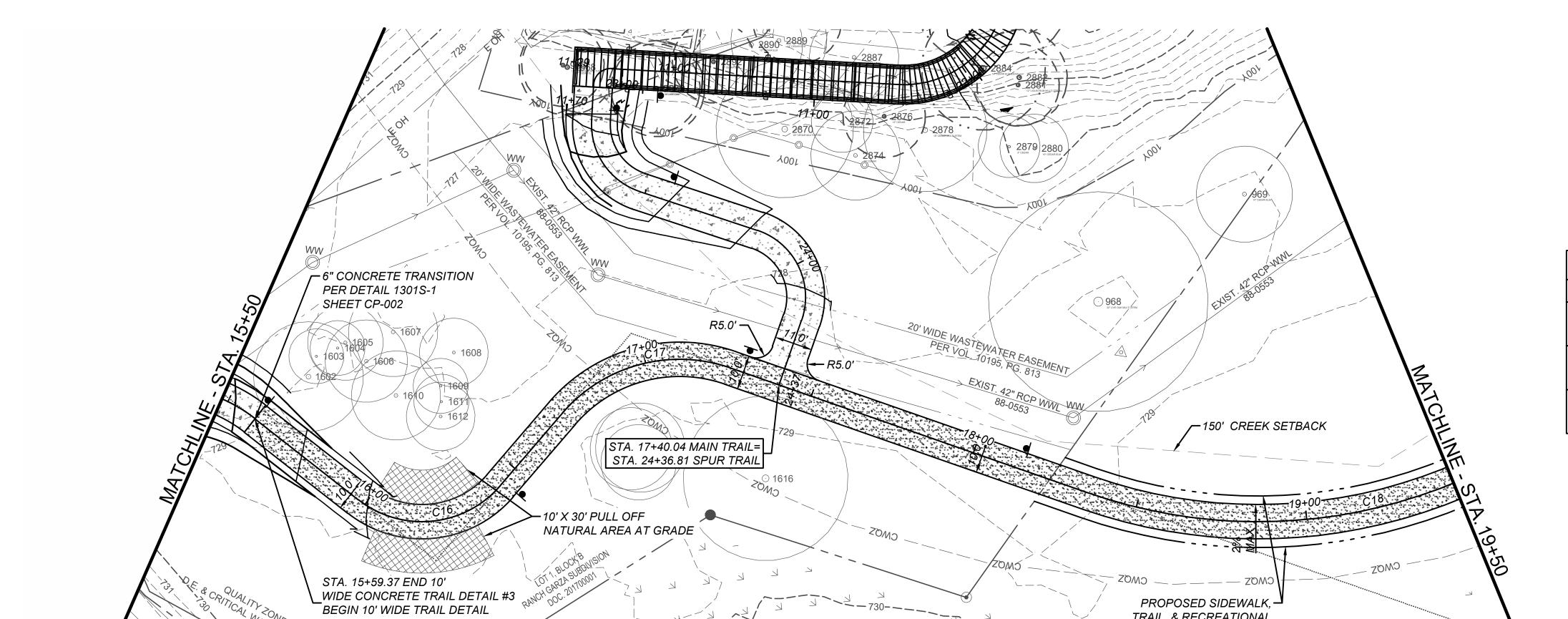


NOTES	NAME	DATE
SURVEY BY	QMD	12/2015
DRAWN BY	IMV	12/2015
DESIGNED BY	IMV	12/2015
CHECKED BY	ESD	12/2015
REVIEWED BY	RL	12/2015
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HORIZONTAL SCALE IN FEET VERTICAL SCALE IN FEET

GP-2020-0085.PW

CP-202 27 OF 89



#2 SHEET CP-001 & CP-002



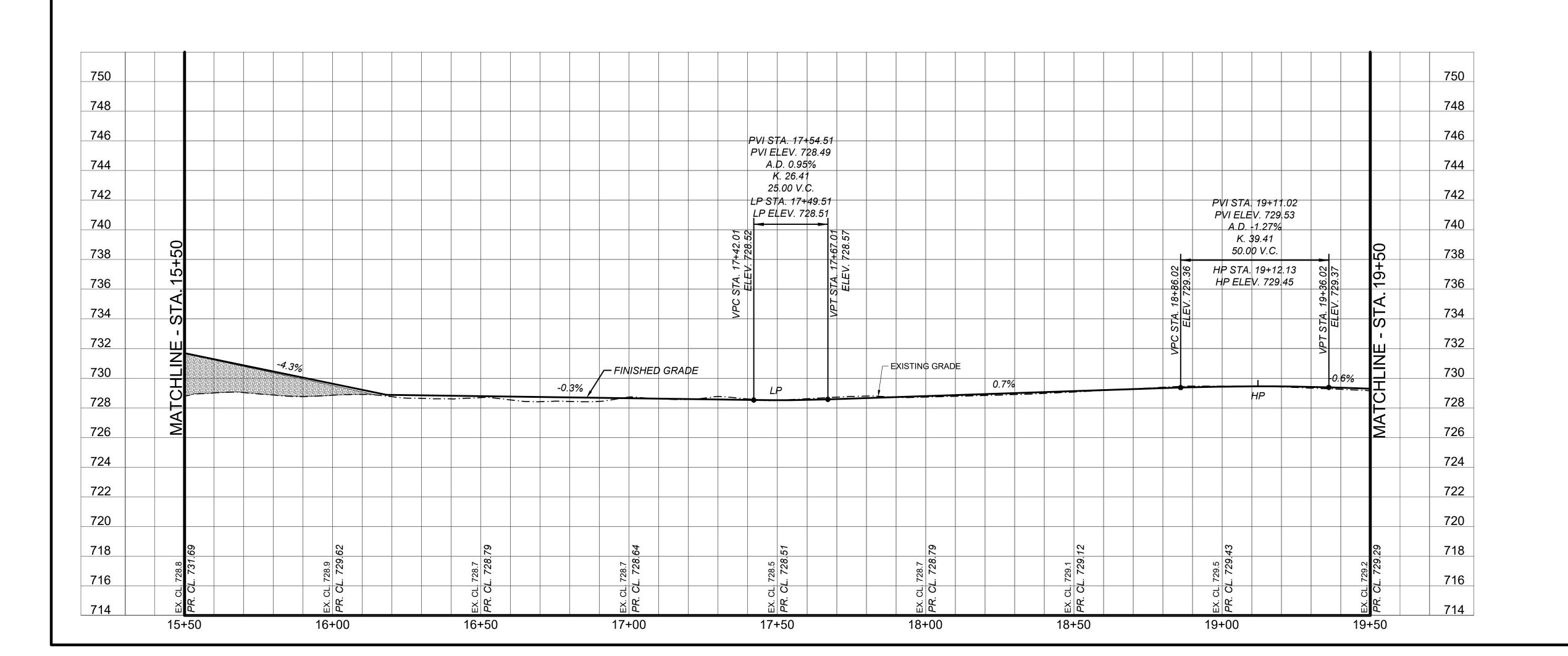
CURVE DATA										
#	R'	L'	DIRECTION	START PT.	END PT.					
C16	30.00	45.72	N76° 19' 45"E	STA. 15+97.61 N. 10053643.06 E. 3086085.48	STA. 16+43.33 N. 10053652.85 E. 3086125.73					
C17	45.00	53.81	N66° 55' 30"E	STA. 16+71.23 N. 10053676.34 E. 3086140.79	STA. 17+25.04 N. 10053696.19 E. 3086187.40					
C18	150.00	226.37	N57° 56' 44"E	STA. 18+35.48 N. 10053674.78 E. 3086295.74	STA. 20+61.85 N. 10053783.84 E. 3086469.91					

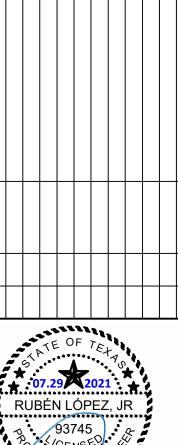
NOTE:

PROPOSED SIDEWALK, -TRAIL, & RECREATIONAL

ESMT. DOC. #201713356

PULL OFF AREAS ARE IDENTIFIED AS AREAS WHERE NO PLANTINGS ARE TO BE INSTALLED. AREAS ARE TO REMAIN AT EXISTING GRADE AND EXISTING CONDITIONS WHERE NOT IMPACTED BY TRAIL CONSTRUCTION.





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CERTIFY THAT THESE PRAWINGS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THEIR INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL FORMAL CITY APPROVAL.

PROFILI 19+50 MAIN TRAIL PLA STA, 15+50 - 3 DEPAI ENGIN VIOLET (

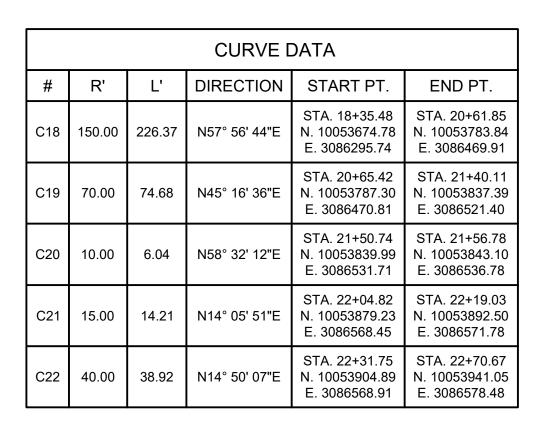
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EVIEWED BY	RL	12/2015	0

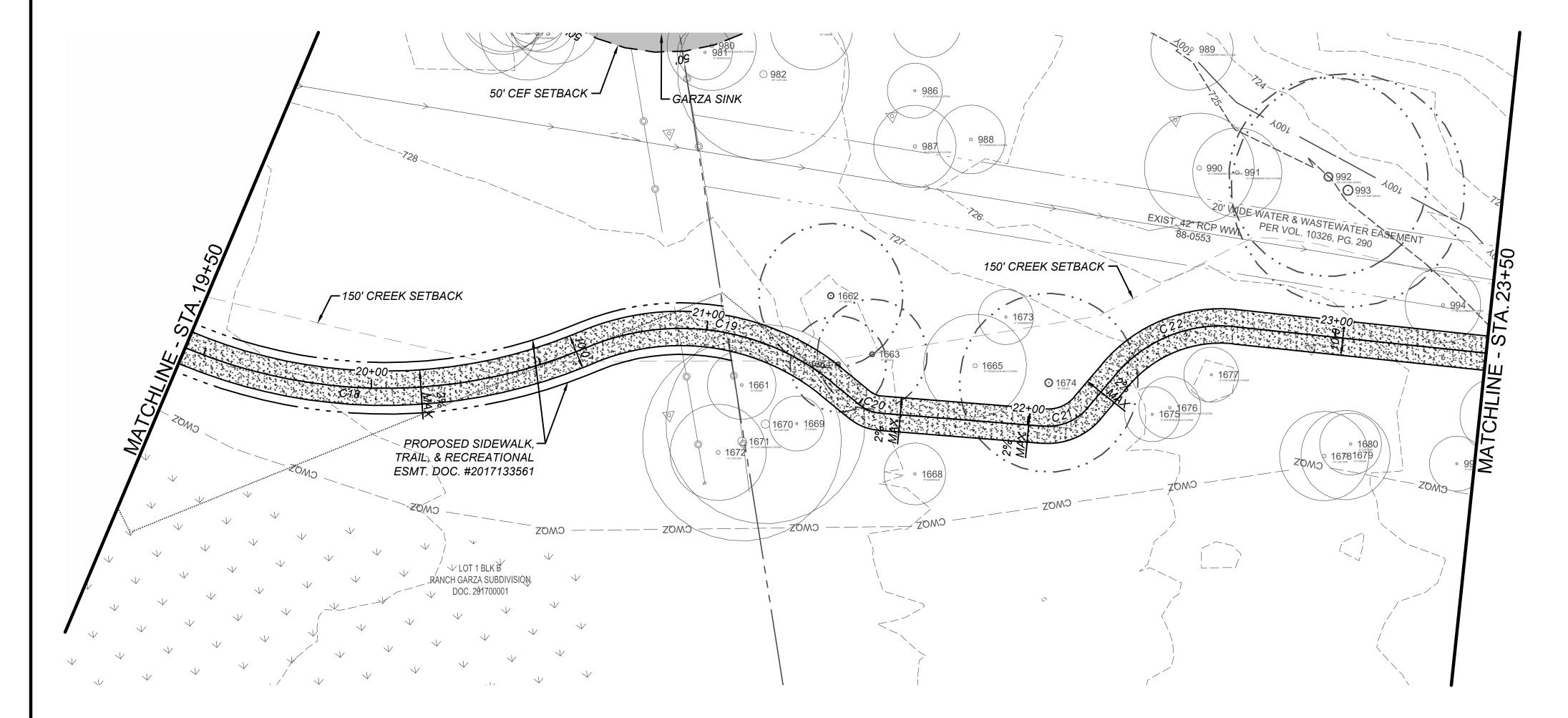
HORIZONTAL SCALE IN FEET VERTICAL SCALE IN FEET

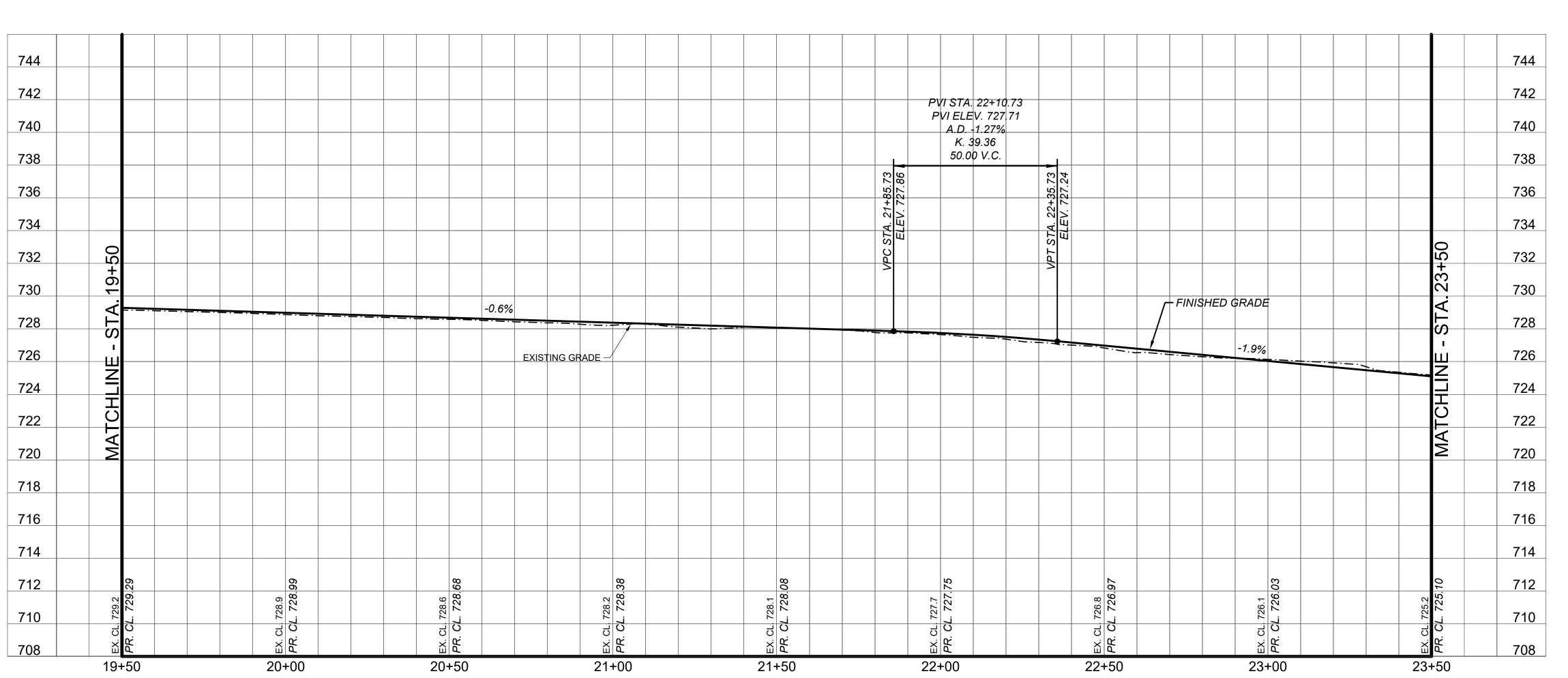
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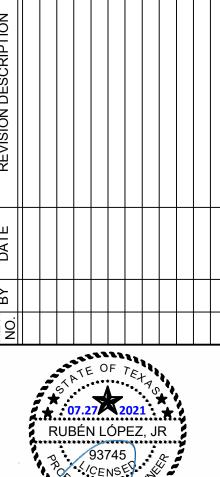
CP-203 <u>28</u> of <u>89</u>











O7.27 2021

RUBÉN LÓPEZ, JR

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LIC. # 93745

RTIEY THAT THESE PRAWINGS

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CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISIOI
VIOLET CROWN TRAIL - NORTI
PHASE 2A

MAIN TRAIL PLAN & PROFILE
STA, 19+50 - STA, 23+50

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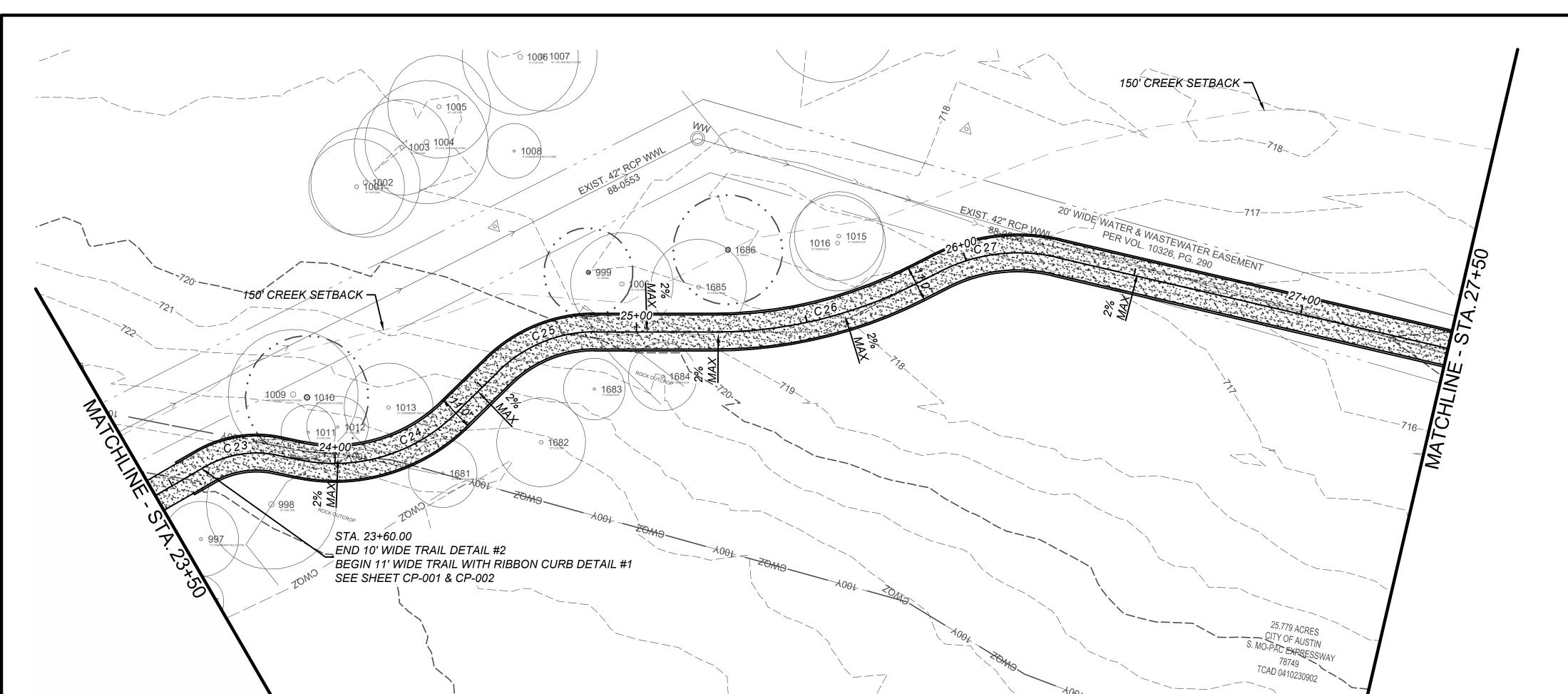


NOTES	NAME	DATE
OLIDVEY DV	OMB	40/0045
SURVEY BY	QMD	12/2015
DRAWN BY	IMV	12/2015
DESIGNED BY	IMV	12/2015
CHECKED BY	ESD	12/2015
REVIEWED BY	RL	12/2015
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HORIZONTAL SCALE IN FEET
0 4 8
VERTICAL SCALE IN FEET

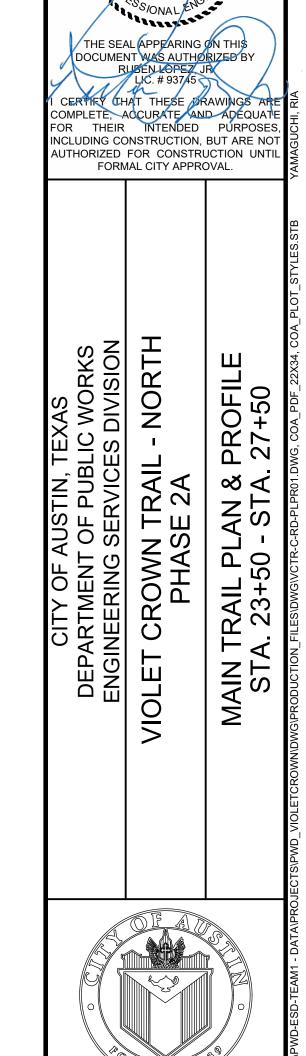
GP-2020-0085.PW

CP-204 <u>29</u> of <u>89</u>



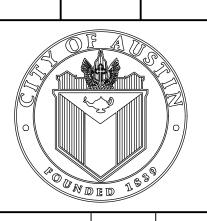


	CURVE DATA										
#	R'	L'	DIRECTION	START PT.	END PT.						
C23	30.00	21.88	N63° 36' 19"E	STA. 23+60.98 N. 10054007.41 E. 3086639.74	STA. 23+82.87 N. 10054016.93 E. 3086658.91						
C24	50.00	48.98	N56° 26' 26"E	STA. 23+89.63 N. 10054017.57 E. 3086665.64	STA. 24+38.60 N. 10054043.58 E. 3086704.84						
C25	40.00	31.01	N50° 35' 12"E	STA. 24+56.69 N. 10054059.49 E. 3086713.44	STA. 24+87.70 N. 10054078.69 E. 3086736.80						
C26	130.00	61.16	N59° 19' 00"E	STA. 25+22.82 N. 10054089.08 E. 3086770.35	STA. 25+83.98 N. 10054120.01 E. 3086822.46						
C27	50.00	34.94	N65° 51' 28"E	STA. 25+91.77 N. 10054125.43 E. 3086828.05	STA. 26+26.72 N. 10054139.43 E. 3086859.29						



RUBÉN LÓPEZ, JR

93745



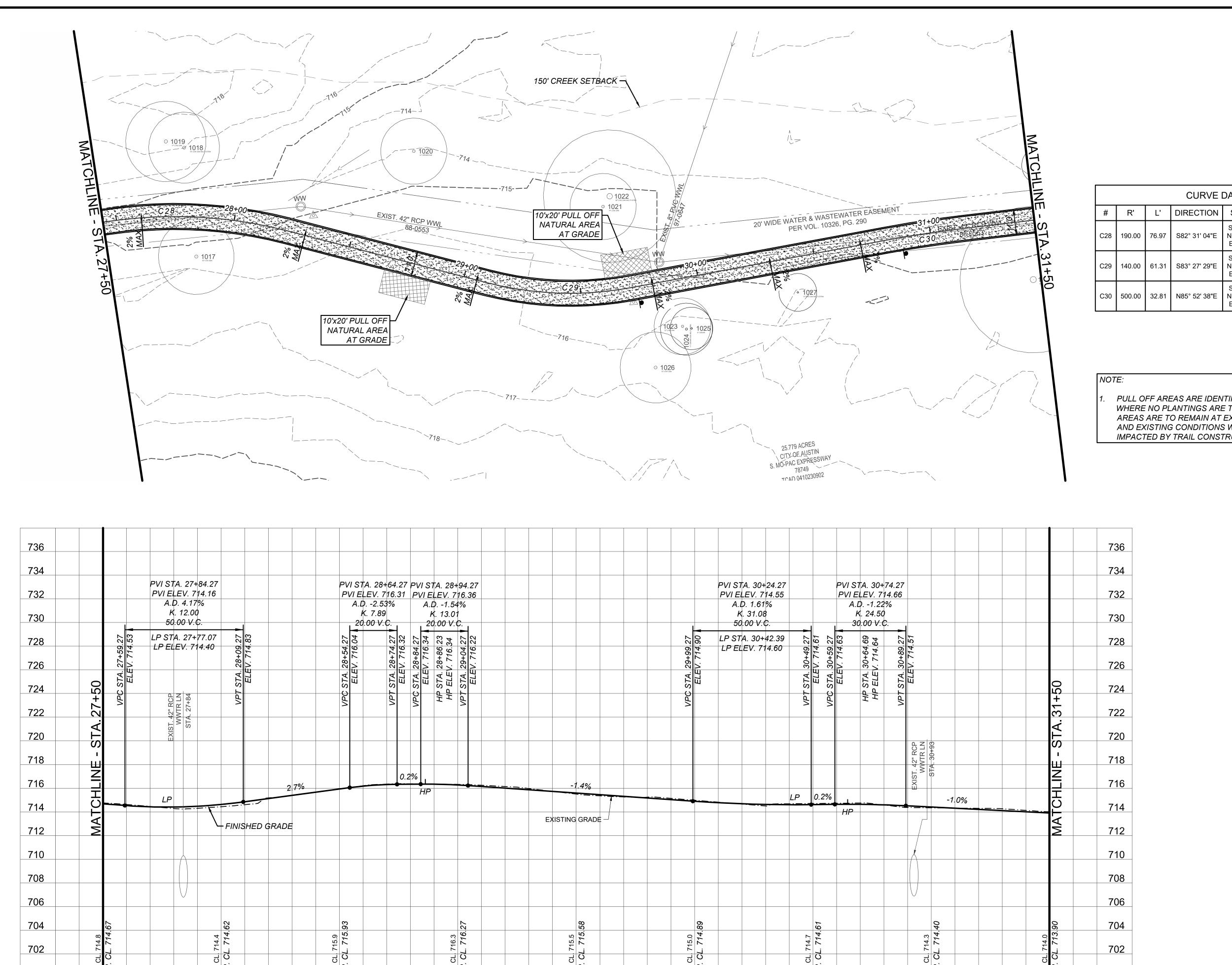
NOTES	NAME	DATE
SURVEY BY	QMD	12/2015
DDAMNDV		
DRAWN BY	IMV	12/2015
DESIGNED BY	IMV	12/2015
CHECKED BY	ESD	12/2015
REVIEWED BY	RL	12/2015

HORIZONTAL SCALE IN FEET VERTICAL SCALE IN FEET

GP-2020-0085.PW

CP-205 30 OF 89

738																					738
736																					736
734		EL. 725.02 STA. 23+72.27 GRADE BREAK EL. 724.29	STA. 23+95.92 GRADE BREAK EL. 723.84										A. 25+94.27					PVI STA. 27+14.27			734
732	3+54.0	725.0; 725.0; 7A. 23 3ADE ! EL.	TA. 23 RADE 1 EL.									A.D	.EV. 717.98)2.29% . 21.87					PVI ELEV. 715.20 A.D. 0.83% K. 59.96			732
730	7A. 23	EL. S S GF	S										.00 V.C.					50.00 V.C.	-		730
728	N G										+69.27			+19.27			+89.27		+39.27		728
	20	r•						-24.74 REAK	718.30 +40.27 REAK	718.00	TA. 25-			TA. 26 ELEV.			STA. 26+89.27 ELEV. 715.78		TA. 27-	+20	726
724	53+ 2 0	4.0%	-1.9%					7A. 25. ADE B	EL. 718.30 STA. 25+40.27 GRADE BREAK	EL.	VPC S			VPTS			VPC S	T. 42" RCP WWTR LN STA. 27+10	VPTS	27+	724
722	STA.							S	S									EXIST. 4		Ĭ.	722
720	1				4	3%														S	720
718							-		-2.0%	-0.0%		FIN	IISHED GRA	DE 7							718
716															- · - · - ·	-2.3%				팅	716
714	MAT												E	ISTING GR	RADE -				-1.	51%.	714
712																				2	712
710																					712
708					CI					0						6		4			708
706	725.2		724.0	723.67	. 721.52		719.3			718.0			717.9			716.69	n n	715.5		714.67	706
704	EX. CL. 7.		EX. CL. 73	ö	EX. CL. 73		EX. CL. 7			CL. 7			EX. CL. 7.			EX. CL. 7	7	PR. CL.		x. CL. 7 R. CL.	704
702	் <u>ட</u> ி		<u> </u>		<u>ি</u> এ		25+00			25+50			<u>வ</u> ட் 26+00			<u>வ</u> ட் 26+50		7+00	2	面 27+50	702



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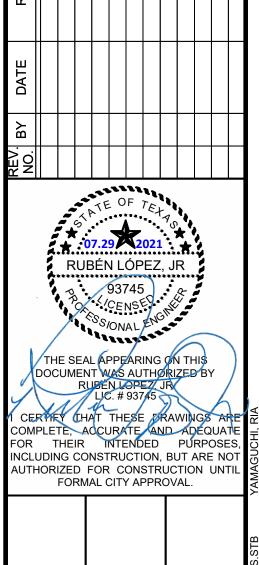
CURVE DATA									
#	R'	L'	DIRECTION	START PT.	END PT.				
28	190.00	76.97	S82° 31' 04"E	STA. 27+45.93 N. 10054148.00 E. 3086978.19	STA. 28+22.89 N. 10054138.05 E. 3087053.98				
29	140.00	61.31	S83° 27' 29"E	STA. 29+10.02 N. 10054109.56 E. 3087136.32	STA. 29+71.32 N. 10054102.63 E. 3087196.74				
230	500.00	32.81	N85° 52' 38"E	STA. 30+80.71 N. 10054114.07 E. 3087305.53	STA. 31+13.53 N. 10054116.43 E. 3087338.25				

PULL OFF AREAS ARE IDENTIFIED AS AREAS WHERE NO PLANTINGS ARE TO BE INSTALLED. AREAS ARE TO REMAIN AT EXISTING GRADE AND EXISTING CONDITIONS WHERE NOT IMPACTED BY TRAIL CONSTRUCTION.

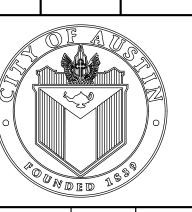
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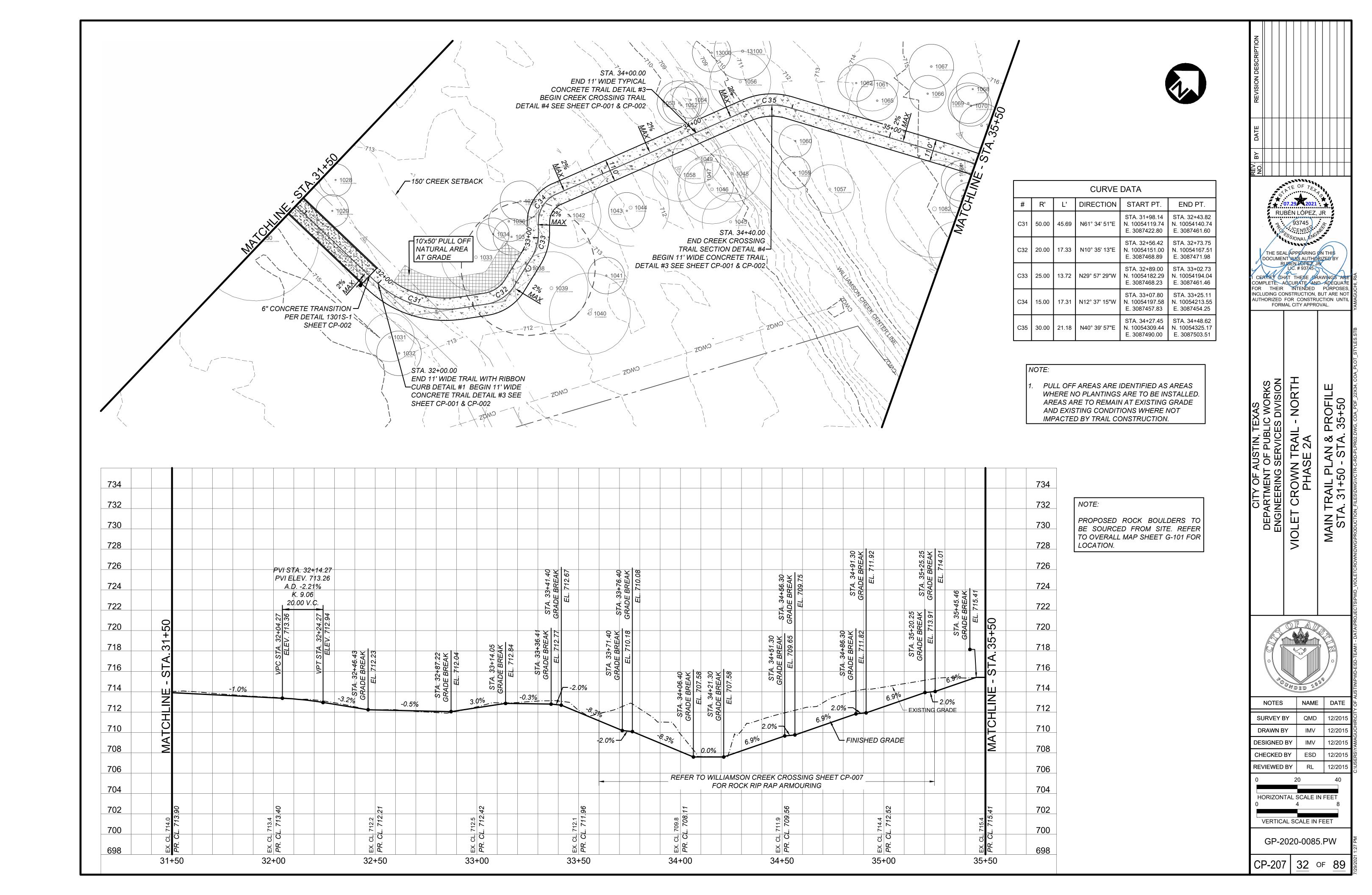


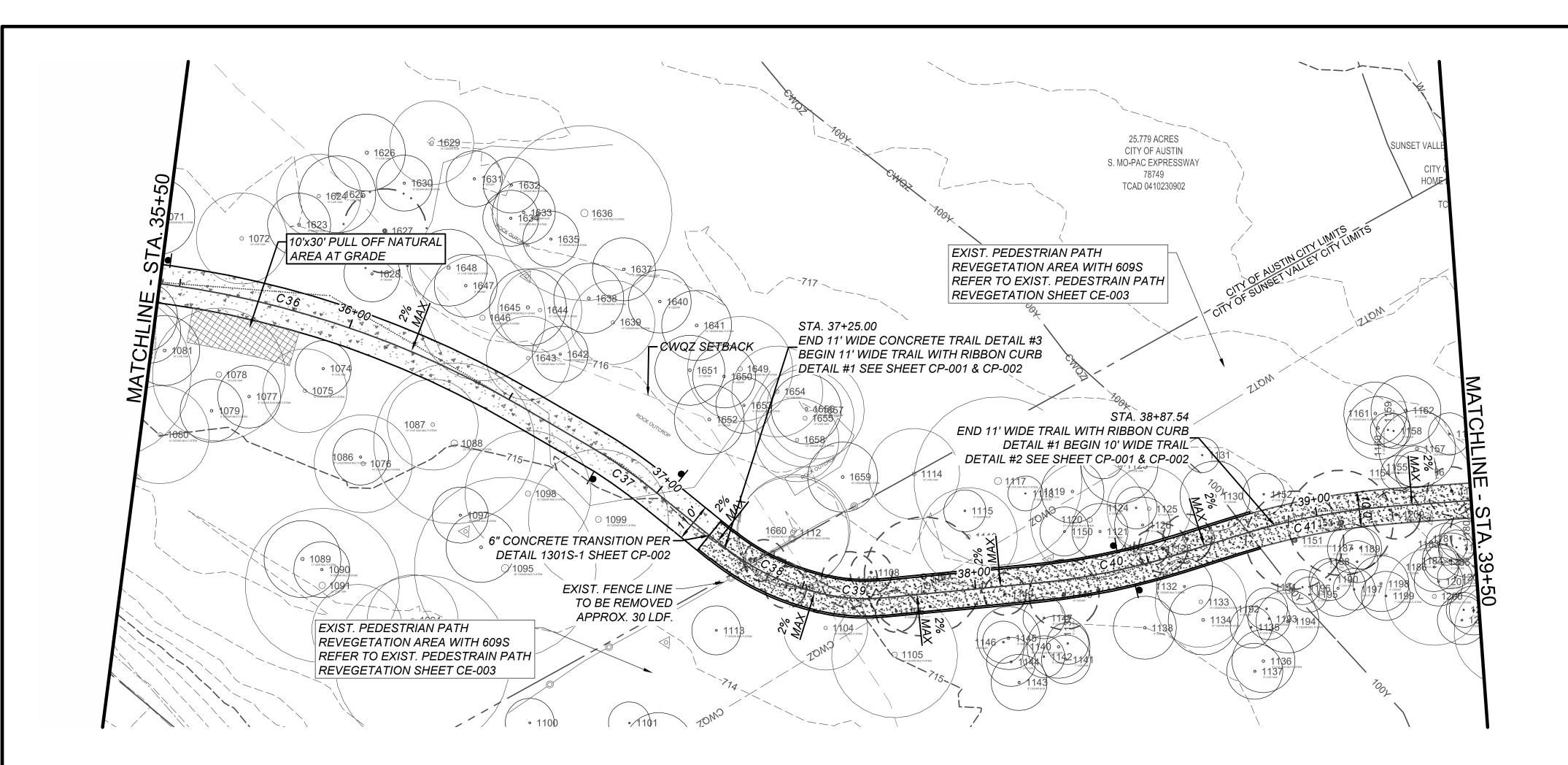
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NOTES	NAME	DATE	Y OF A
SURVEY BY	QMD	12/2015	C:\USERS\YAMAGUCHIR\CITY OF AU
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ESIGNED BY	IMV	12/2015	AMAC
CHECKED BY	ESD	12/2015	ERS\\
REVIEWED BY	RL	12/2015	C:\US
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HORIZONTAL SCALE IN FEET VERTICAL SCALE IN FEET

GP-2020-0085.PW

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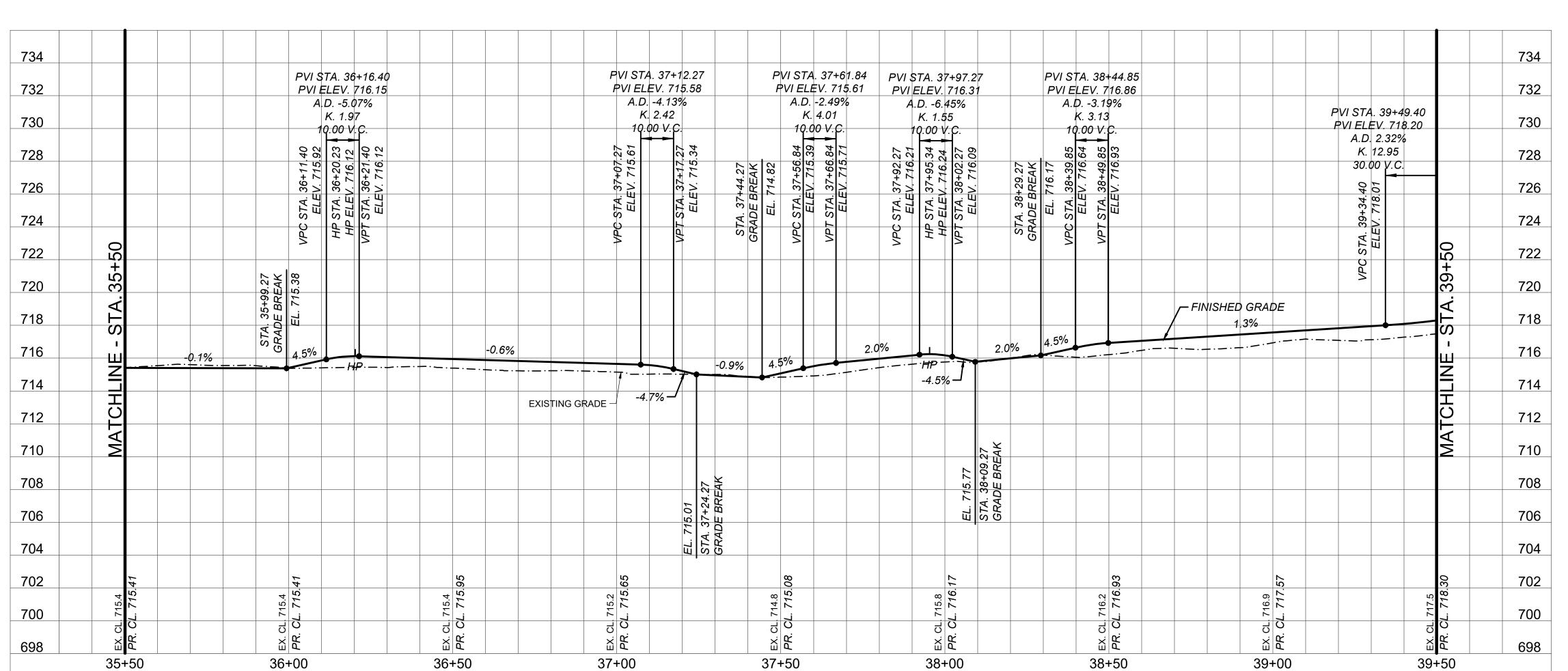




	CURVE DATA									
#	R'	L'	DIRECTION	START PT.	END PT.					
C36	275.00	122.82	N73° 40' 57"E	STA. 35+30.43 N. 10054364.97 E. 3087574.99	STA. 36+53.25 N. 10054399.20 E. 3087691.88					
C37	150.00	23.49	S89° 02' 12"E	STA. 36+76.10 N. 10054400.60 E. 3087714.69	STA. 36+99.59 N. 10054400.20 E. 3087738.15					
C38	70.00	31.13	N82° 42' 30"E	STA. 37+23.58 N. 10054397.93 E. 3087762.03	STA. 37+54.72 N. 10054401.85 E. 3087792.66					
C39	50.00	16.62	N60° 26' 42"E	STA. 37+56.20 N. 10054402.35 E. 3087794.05	STA. 37+72.82 N. 10054410.51 E. 3087808.44					
C40	200.00	41.95	N44° 54' 52"E	STA. 38+17.13 N. 10054438.45 E. 3087842.85	STA. 38+59.08 N. 10054468.10 E. 3087872.41					
C41	200.00	46.59	N45° 34' 45"E	STA. 38+75.37 N. 10054480.78 E. 3087882.64	STA. 39+21.96 N. 10054513.31 E. 3087915.84					

NOTE:

PULL OFF AREAS ARE IDENTIFIED AS AREAS WHERE NO PLANTINGS ARE TO BE INSTALLED. AREAS ARE TO REMAIN AT EXISTING GRADE AND EXISTING CONDITIONS WHERE NOT IMPACTED BY TRAIL CONSTRUCTION.



NAME DATE

12/2015

12/2015

12/2015

12/2015

QMD

IMV

IMV

ESD

SURVEY BY

DRAWN BY

DESIGNED BY

CHECKED BY

REVIEWED BY RL

HORIZONTAL SCALE IN FEET

VERTICAL SCALE IN FEET

GP-2020-0085.PW

CP-208 33 OF 89

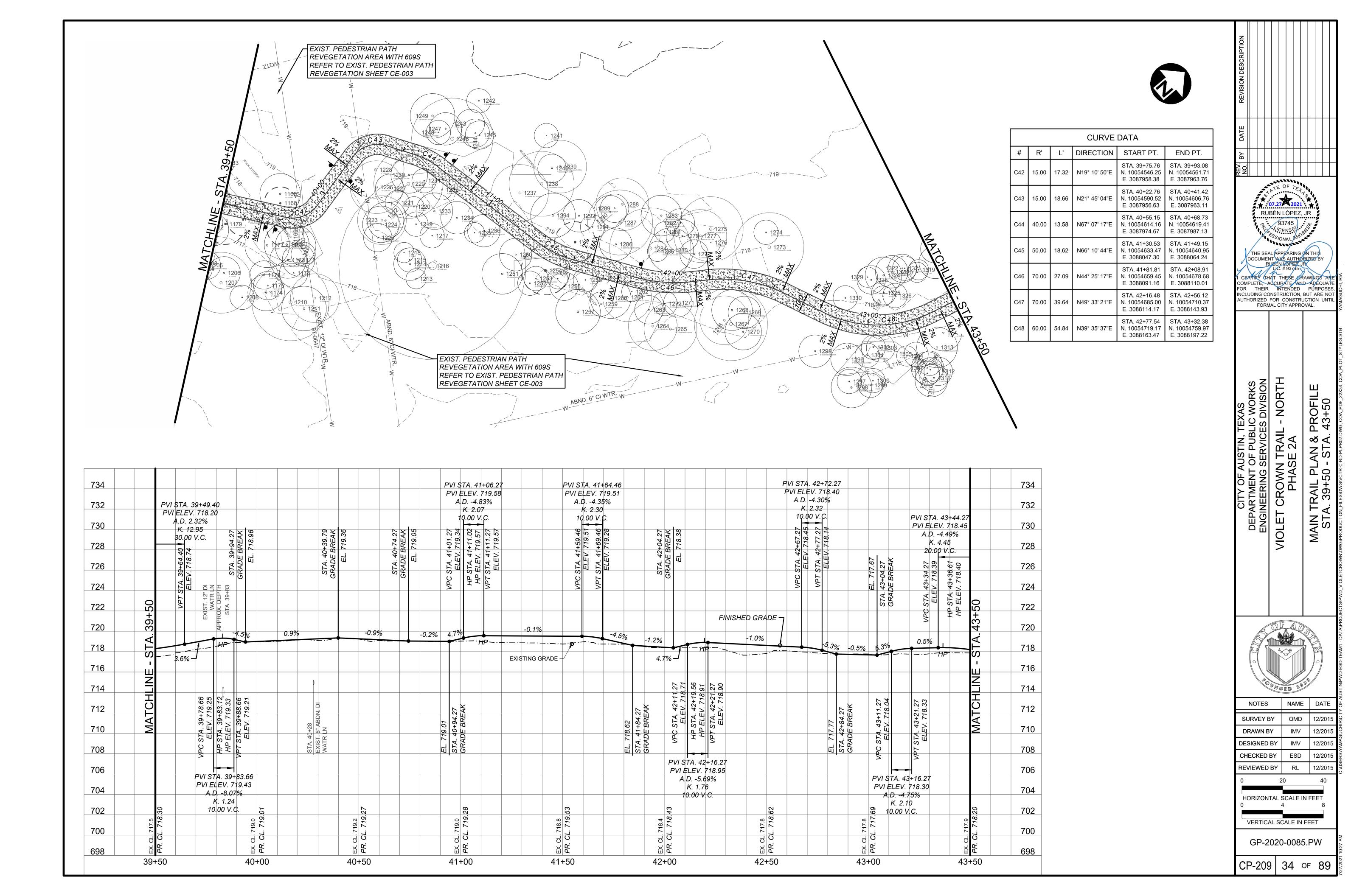
RUBÉN LÓPEZ, JR

93745

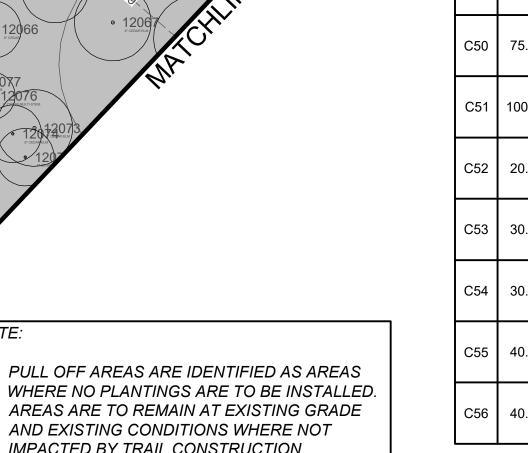
DOCUMENT WAS AUTHORIZED BY RUBEN LOPEZ, JR LIC. # 93745

I CERNEY THAT THESE TRAWINGS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THEIR INTENDED PURPOSES,

INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL FORMAL CITY APPROVAL.



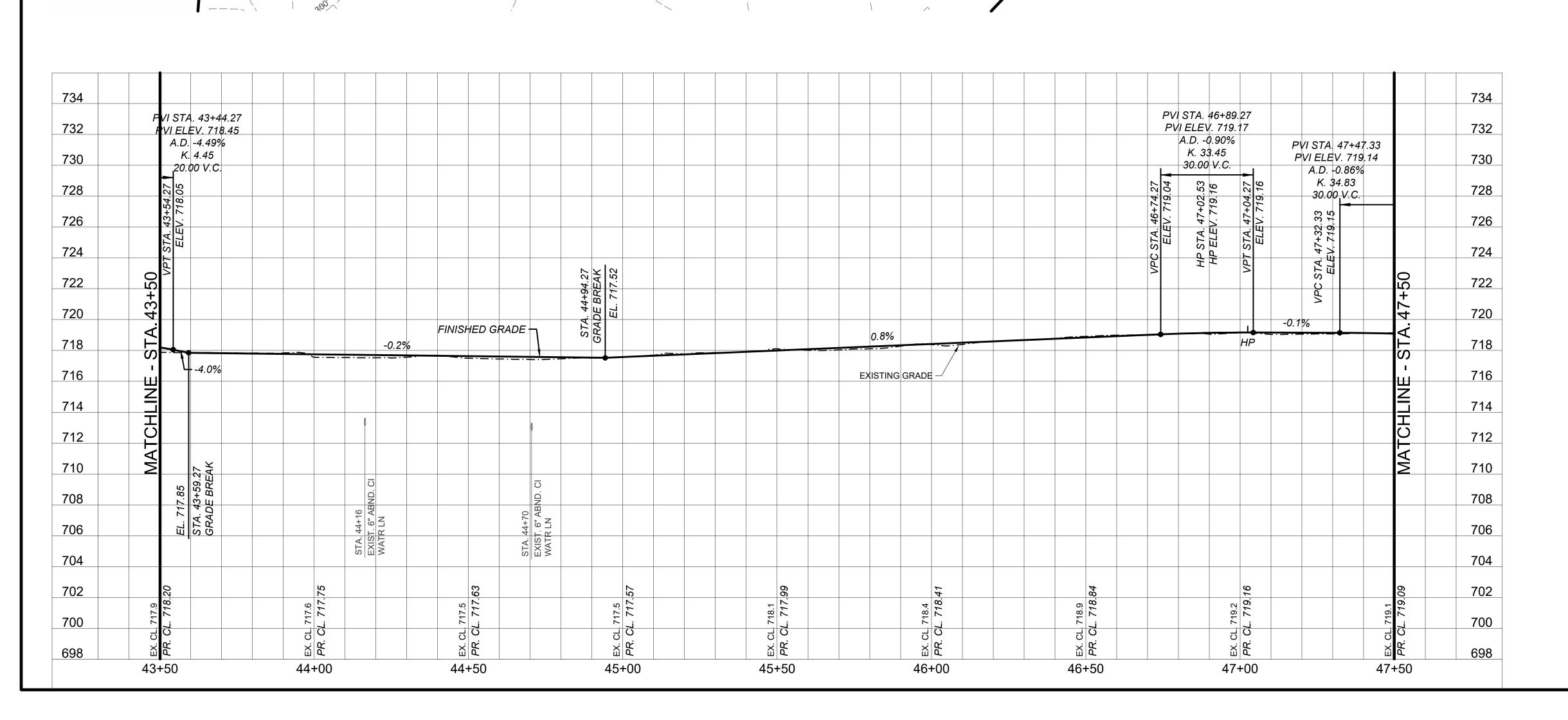




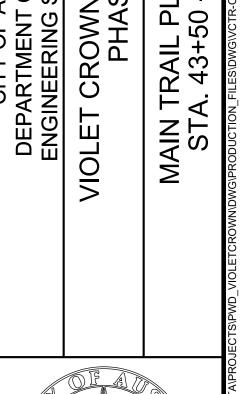
AND EXISTING CONDITIONS WHERE NOT IMPACTED BY TRAIL CONSTRUCTION.

- KARST SINKHOLE DEPRESSION

CURVE DATA										
#	R'	L'	DIRECTION	START PT.	END PT.					
C49	50.00	34.83	N33° 22' 00"E	STA. 43+54.09 N. 10054781.09 E. 3088202.26	STA. 43+88.93 N. 10054809.59 E. 3088221.03					
C50	75.00	28.39	N42° 28' 47"E	STA. 43+99.77 N. 10054816.07 E. 3088229.73	STA. 44+28.16 N. 10054836.88 E. 3088248.79					
C51	100.00	34.52	N21° 44' 46"E	STA. 44+39.83 N. 10054846.82 E. 3088254.91	STA. 44+74.35 N. 10054878.73 E. 3088267.63					
C52	20.00	16.53	N11° 49' 06"W	STA. 44+88.77 N. 10054892.83 E. 3088270.59	STA. 45+05.30 N. 10054908.55 E. 3088267.30					
C53	30.00	29.23	N07° 34' 40"W	STA. 45+17.99 N. 10054918.89 E. 3088259.93	STA. 45+47.23 N. 10054946.74 E. 3088256.23					
C54	30.00	33.18	N11° 20' 34"W	STA. 45+61.71 N. 10054960.32 E. 3088261.26	STA. 45+94.89 N. 10054991.21 E. 3088255.07					
C55	40.00	29.71	N21° 44' 53"W	STA. 46+15.37 N. 10055006.19 E. 3088241.09	STA. 46+45.08 N. 10055033.15 E. 3088230.33					
C56	40.00	36.87	N25° 55' 59"E	STA. 46+98.00 N. 10055086.07 E. 3088229.89	STA. 47+34.87 N. 10055118.06 E. 3088245.45					



10'x30' PULL OFF NATURAL AREA AT GRADE

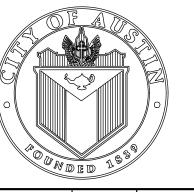


RUBÉN LÓPEZ, JR

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY RUBEN TOPEZ, JR LVC. # 93745

CERTIFY THAT THESE DRAWINGS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THEIR INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL

FORMAL CITY APPROVAL.

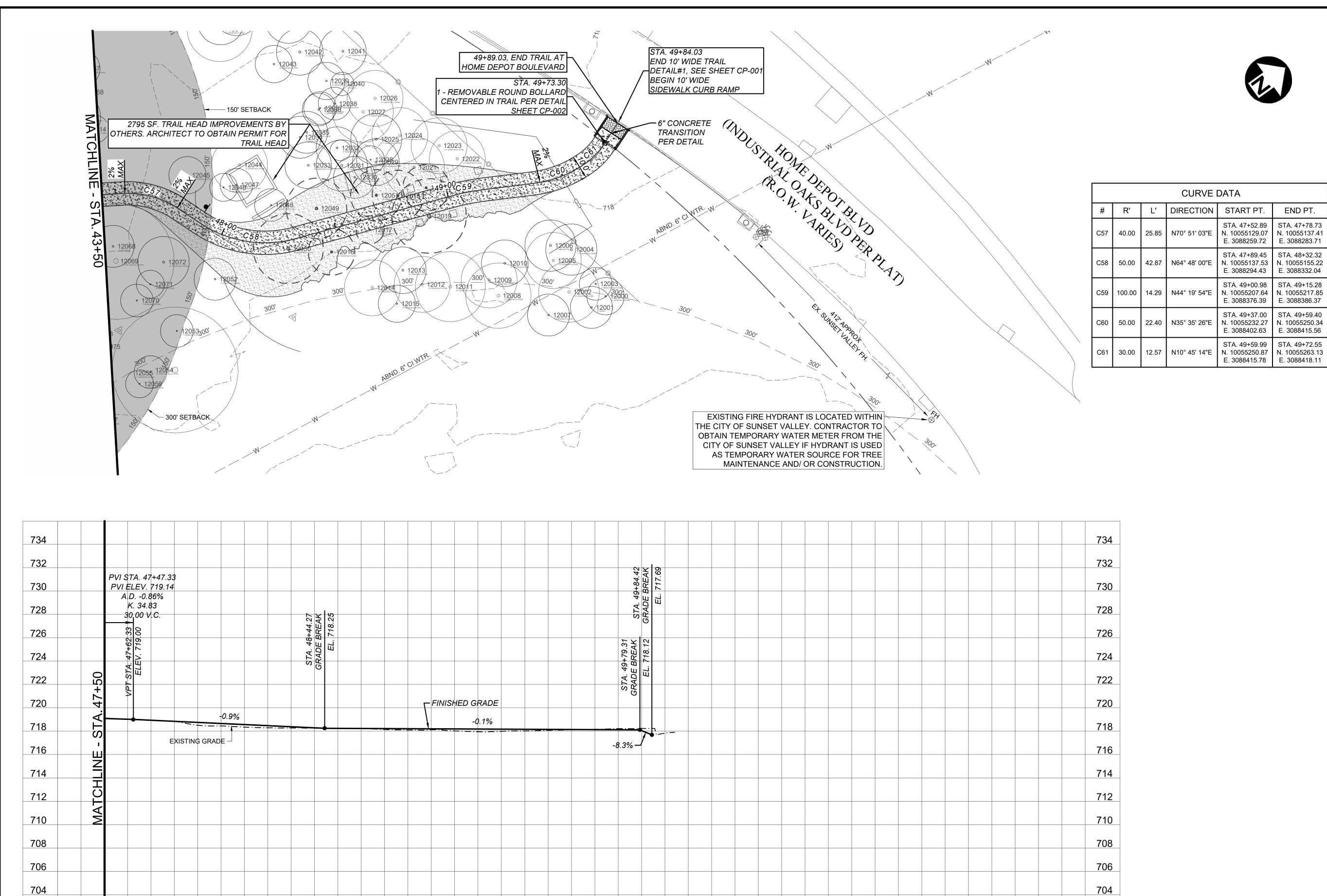


NOTES	NAME	DATE
SURVEY BY	QMD	12/2015
DRAWN BY	IMV	12/2015
DESIGNED BY	IMV	12/2015
CHECKED BY	ESD	12/2015
REVIEWED BY	RL	12/2015

HORIZONTAL SCALE IN FEET VERTICAL SCALE IN FEET

GP-2020-0085.PW

CP-210 35 OF 89



CL. 718.0 CL. 718.20

EX. (

49+00

CL. 718.2 CL. 718.25

EX. (

48+50

EX. (

48+00

702

700

698

47+50

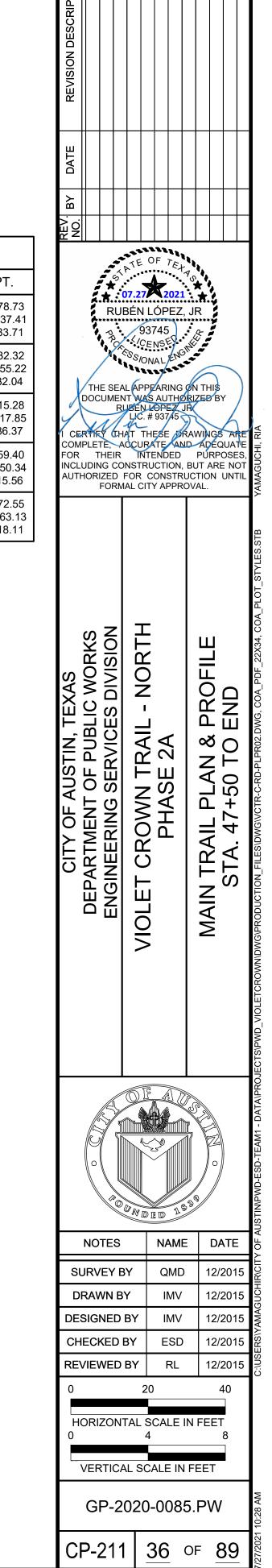
EX. CL. 718.1 PR. CL. 718.15

49+50

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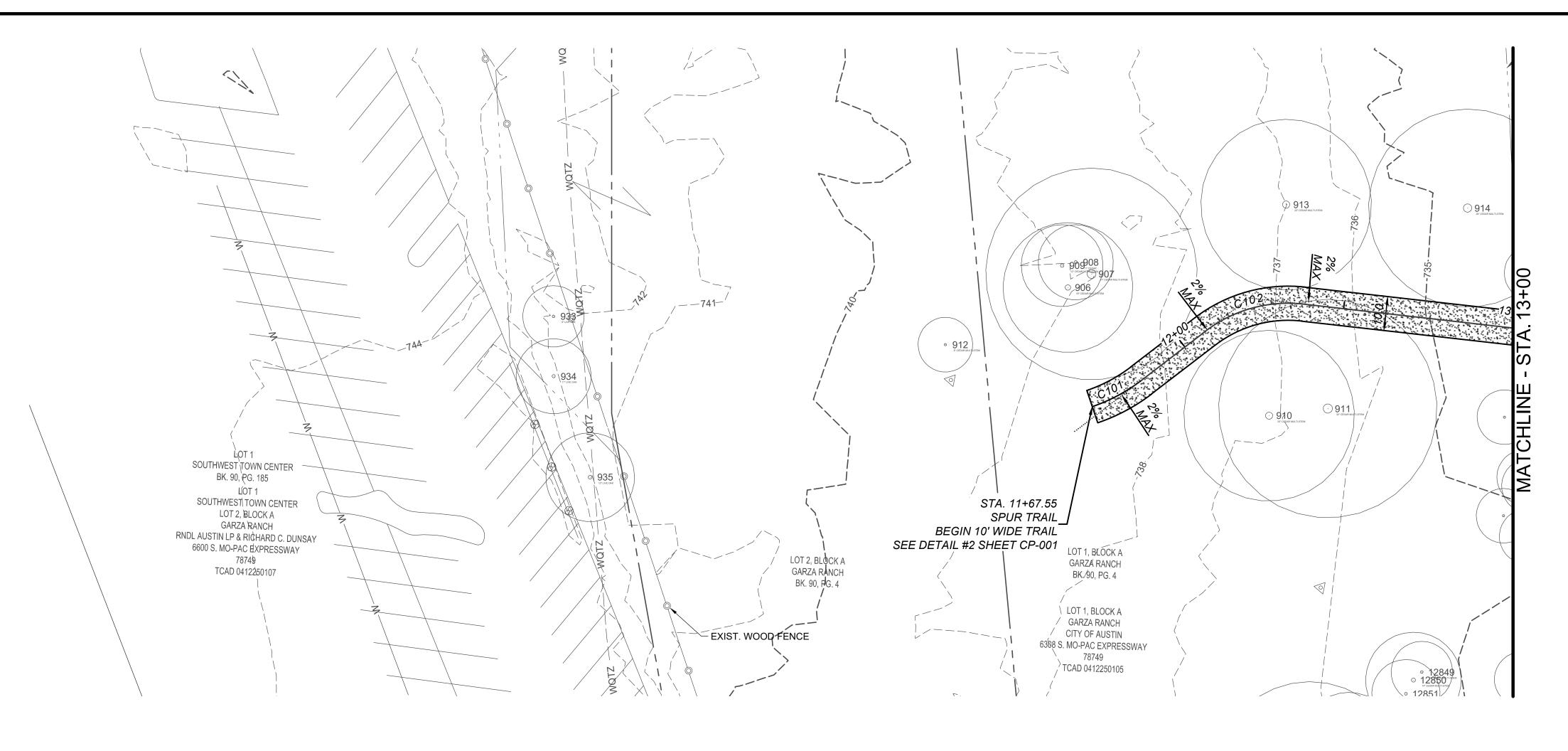


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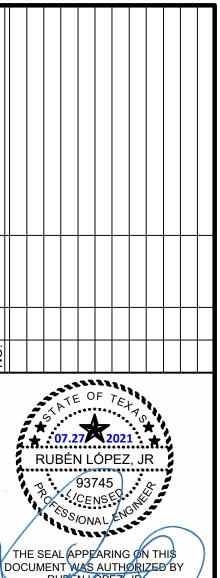
698

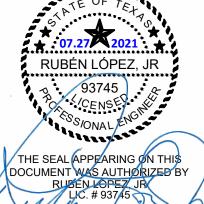
51+50





CURVE DATA								
#	R'	Ľ'	DIRECTION	START PT.	END PT.			
C101	50.00	16.30	N21° 19' 50"E	STA. 11+67.55 N. 10053999.65 E. 3085444.15	STA. 11+83.85 N. 10054014.76 E. 3085450.05			
C102	40.00	30.65	N33° 56' 35"E	STA. 12+07.51 N. 10054037.91 E. 3085454.97	STA. 12+38.16 N. 10054062.72 E. 3085471.66			





THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY RUSEN LOPEZ JR LIC. # 937.45

I CERTIFY CHAT THESE PRAWINGS ARE TO SERVICE AND ADEQUATE FOR THEIR INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL FORMAL CITY APPROVAL.

CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
VIOLET CROWN TRAIL - NORTH
PHASE 2A TRAIL LATERAL PLAN & BEGIN - STA, 13+00

84 [5	ED	
NOTES	NAME	DATE
SURVEY BY	QMD	12/2015
DRAWN BY	IMV	12/2015
DESIGNED BY	IMV	12/2015
CHECKED BY	ESD	12/2015
REVIEWED BY	RL	12/2015
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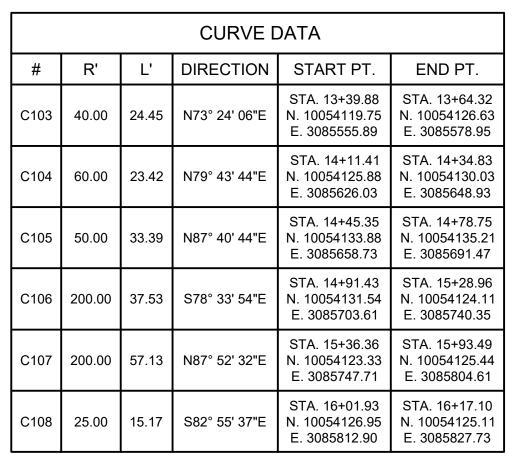
VERTICAL SCALE IN FEET

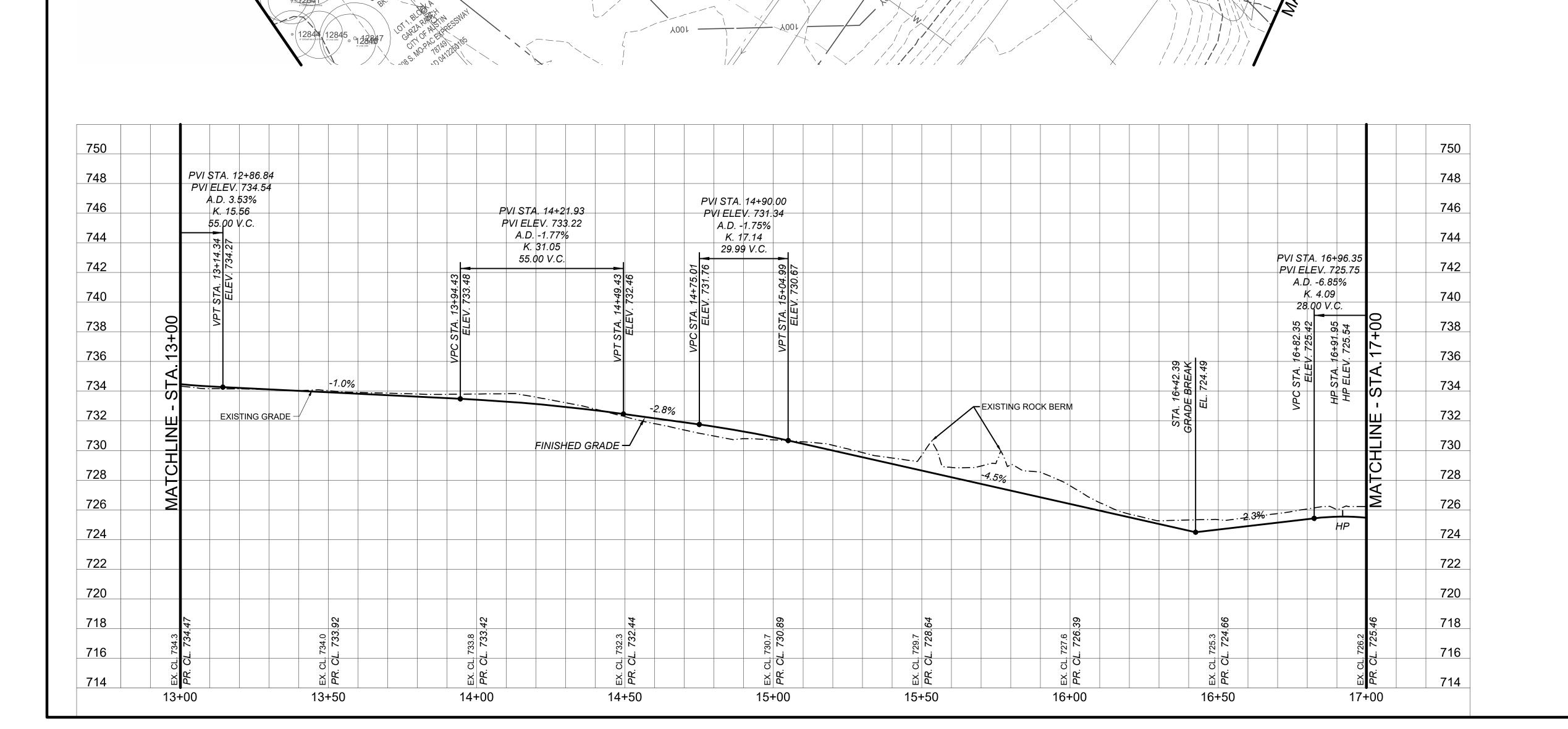
GP-2020-0085.PW

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															75
54															75
52															75
50									PVIS	TA. 12+15.69					75
48								v 710	PVI E	LEV. 737.75 D2.54%		PVI STA.	. 12+86.84		74
46								+67.5; TRAI 738.7	3	K. 13.76 5.00 V.C.		PVI ELE A.D.	V. 734.54 3.53%		74
14								SPUR SPUR EL.	98.19	33.19	736.96		15.56 0 V.C.		74
42		\ \ \.\.						STA. 11+67.55 BEGIN SPUR TRAIL EL. 738.70	STA. 11+98.19 ELEV. 738.09	72	EV.	735.78		00+	74
40			`	 ·-·-·		FINISH	ED GRADE		PC ST	PT ST	Ш	TA. 12+ ELEV. 7		13+	74
88					Ť·一·+·		F·		3			PC ST		TA.	73
86							EXISTIN	G GRADE						\frac{1}{2}	73
34														Z Z	73
32														CH O	7:
30														MATCHL	7;
28															72
26															72
4															72
2									90		20			47	72
20									737.8		EX. CL. 736.1 PR. CL. 736.3			734.	72
8									EX. CL		7. S.		, C.	PR. CL	7







STA. 15+80.00 SPUR TRAIL END 10' WIDE TO 8' WIDE TRANSITION CONCRETE

SHEET CP-001 & CP-002

BEGIN 8' WIDE CONCRETE TRAIL

-6" CONCRETE TRANSITION

STA. 14+90.51 SPUR TRAIL

CONCRETE TRAIL SEE

END 10 WIDE CONCRETE TRAILS

DETAIL #3 SHEET CP-001 & CP-002

PER DETAIL 1301S-1

SHEET CP-002

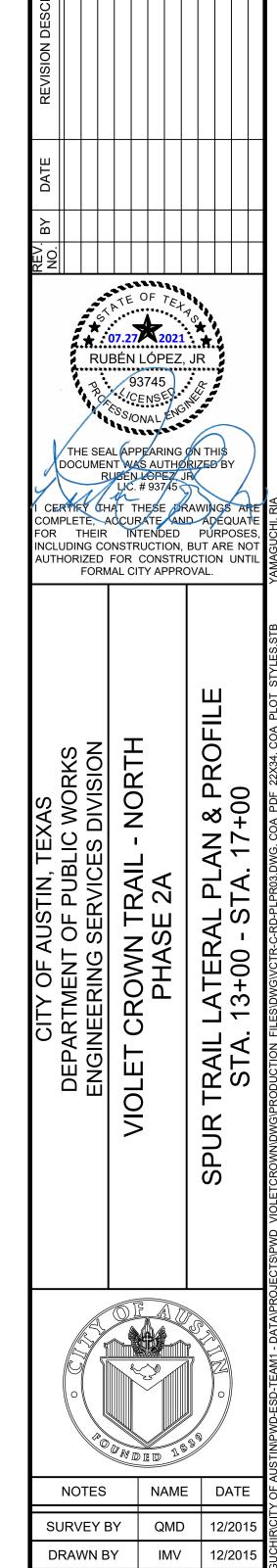
STA. 14+27.40 SPUR TRAIL END 10' WIDE TRAIL DETAIL #2_ BEGIN 10' WIDE CONCRETE TRAIL

SEE DETAIL #3 SHEET CP-001 & CP-002

916
 26⁴ MESQUITE MULTI-STEN

TRAIL DETAIL #3-

SEE DETAIL #6



DESIGNED BY

CHECKED BY

REVIEWED BY RL

20

HORIZONTAL SCALE IN FEET

VERTICAL SCALE IN FEET

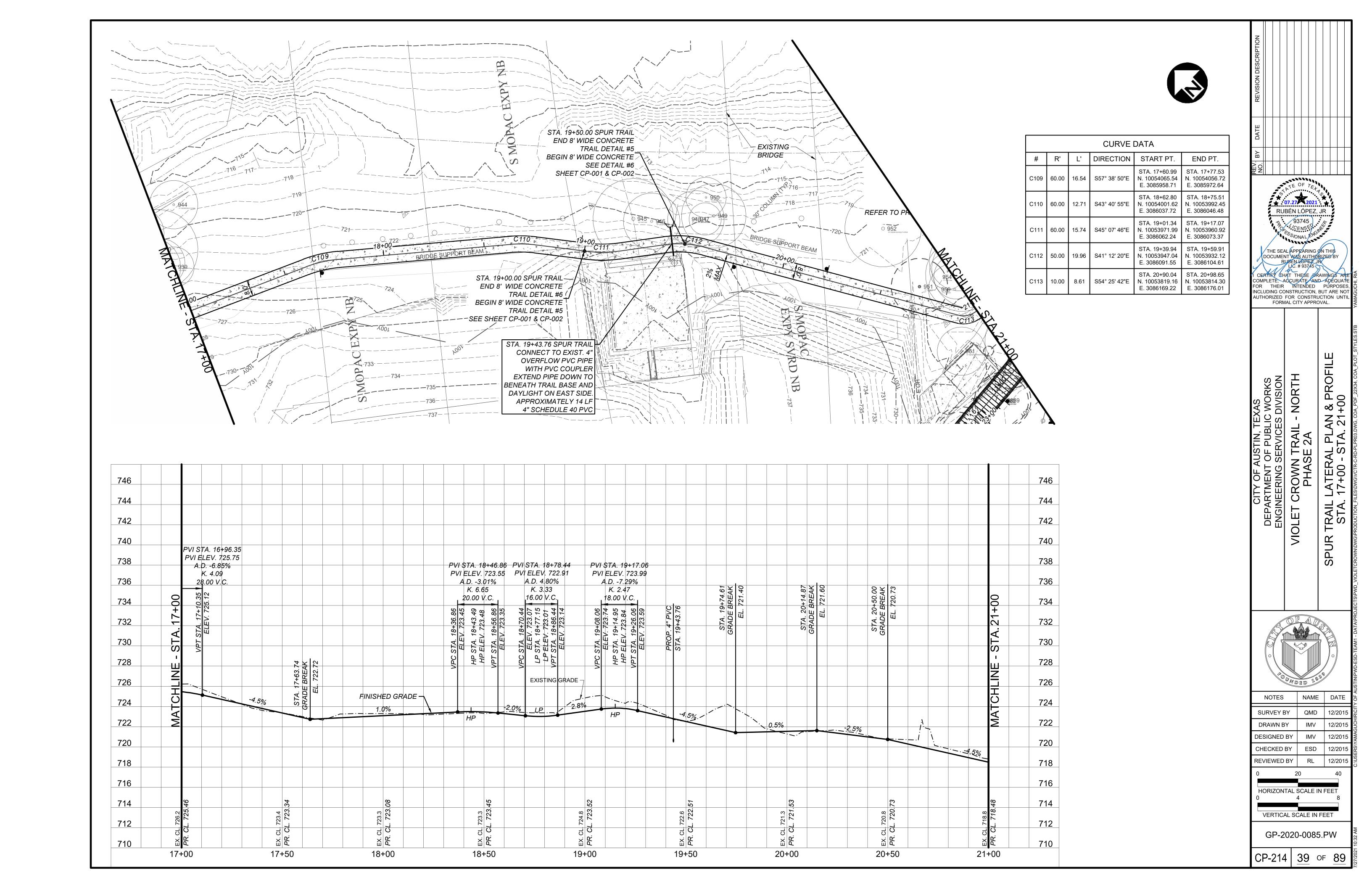
GP-2020-0085.PW

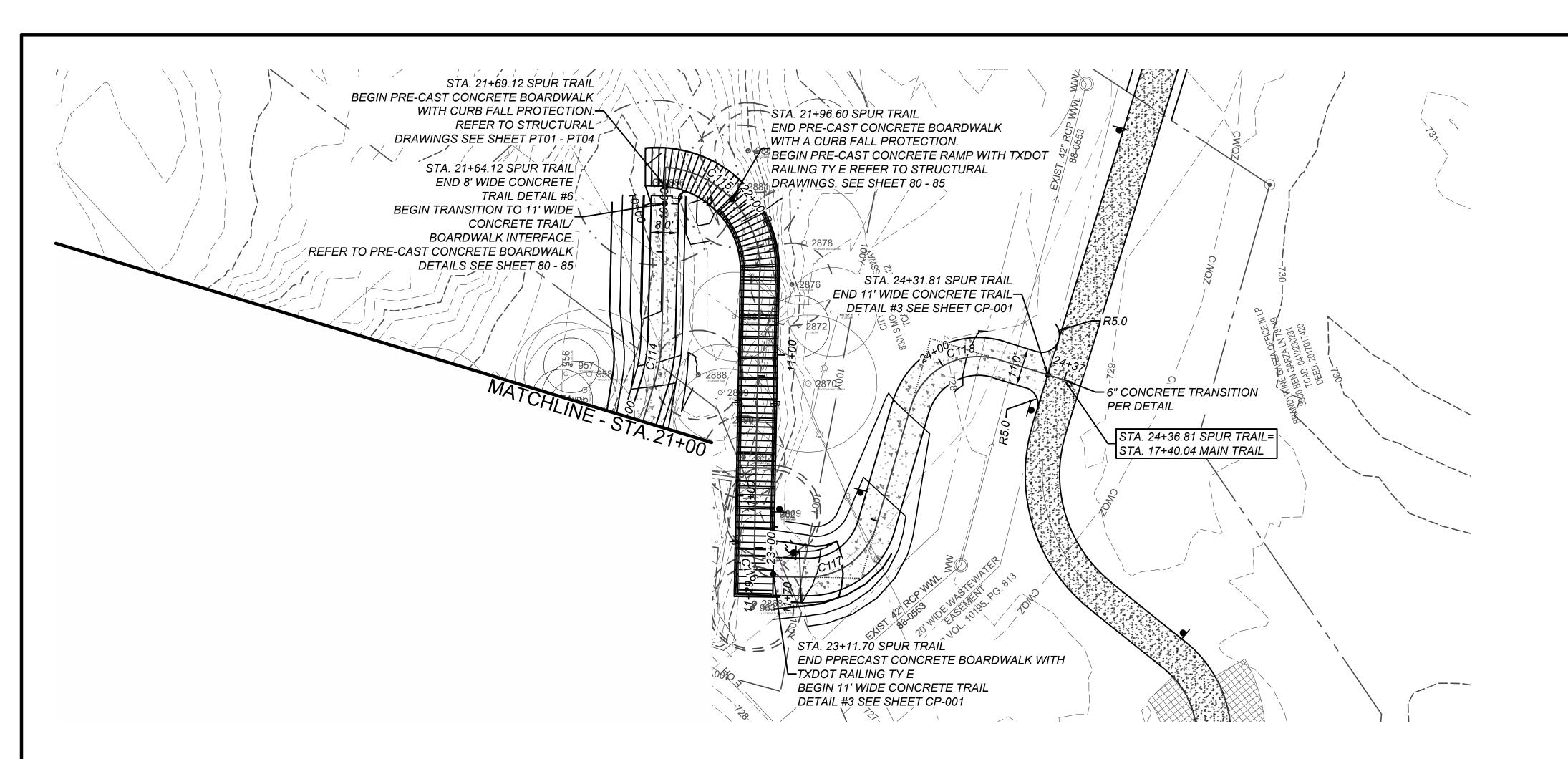
CP-213 38 OF 89

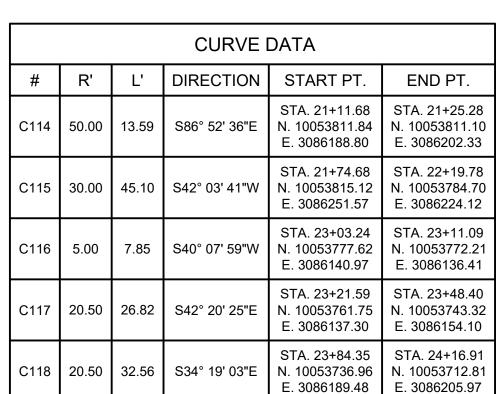
IMV 12/2015

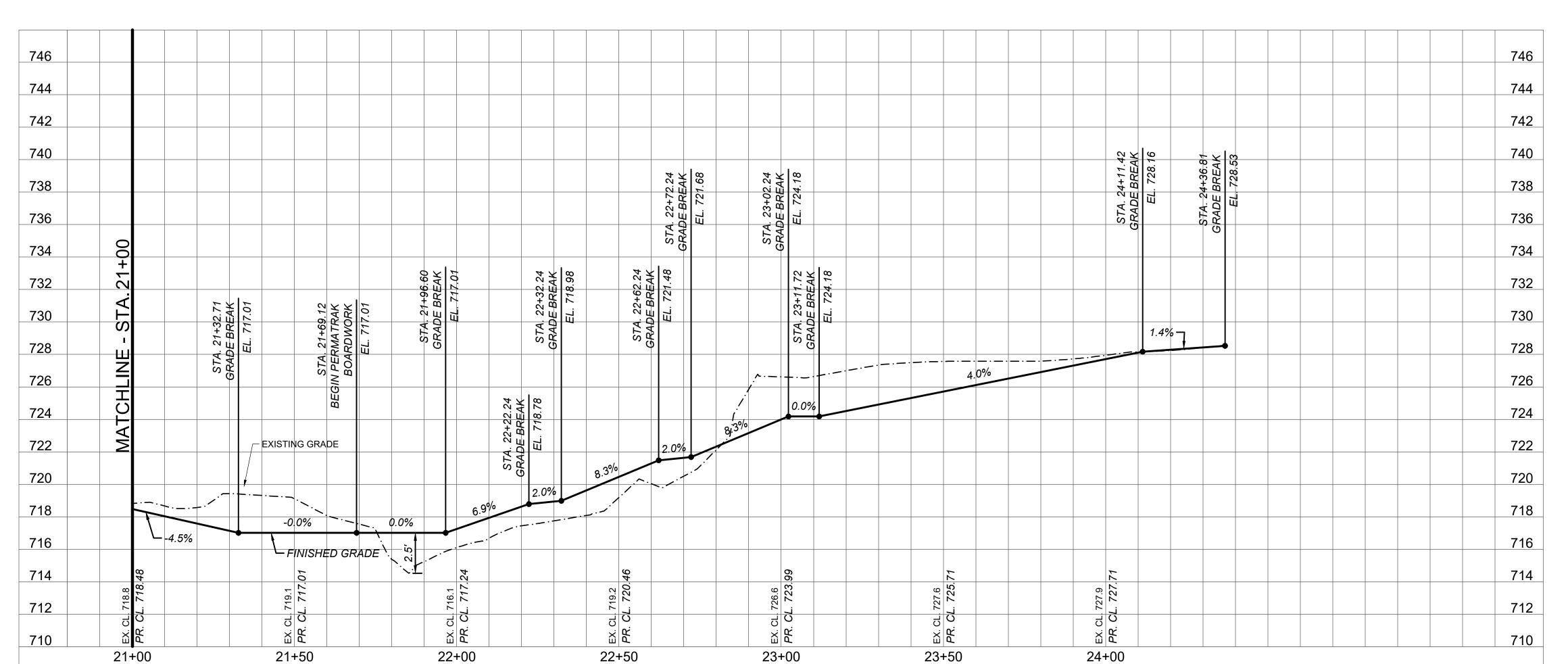
ESD 12/2015

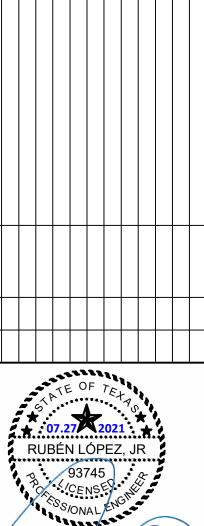
12/2015









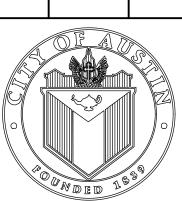


THE SEAL APPEARING ON THIS

THE SEAL APPEARING ON THIS
DOCUMENT WAS AUTHORIZED BY
RUSEN LOPEZ JR
LIC. # 93745

I CERTIFY THAT THESE PRAWINGS ARE
COMPLETE, ACCURATE AND ADEQUATE
FOR THE INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL FORMAL CITY APPROVAL.

NORTH ∞ DEPA ENGIN VIOLET TRAIL

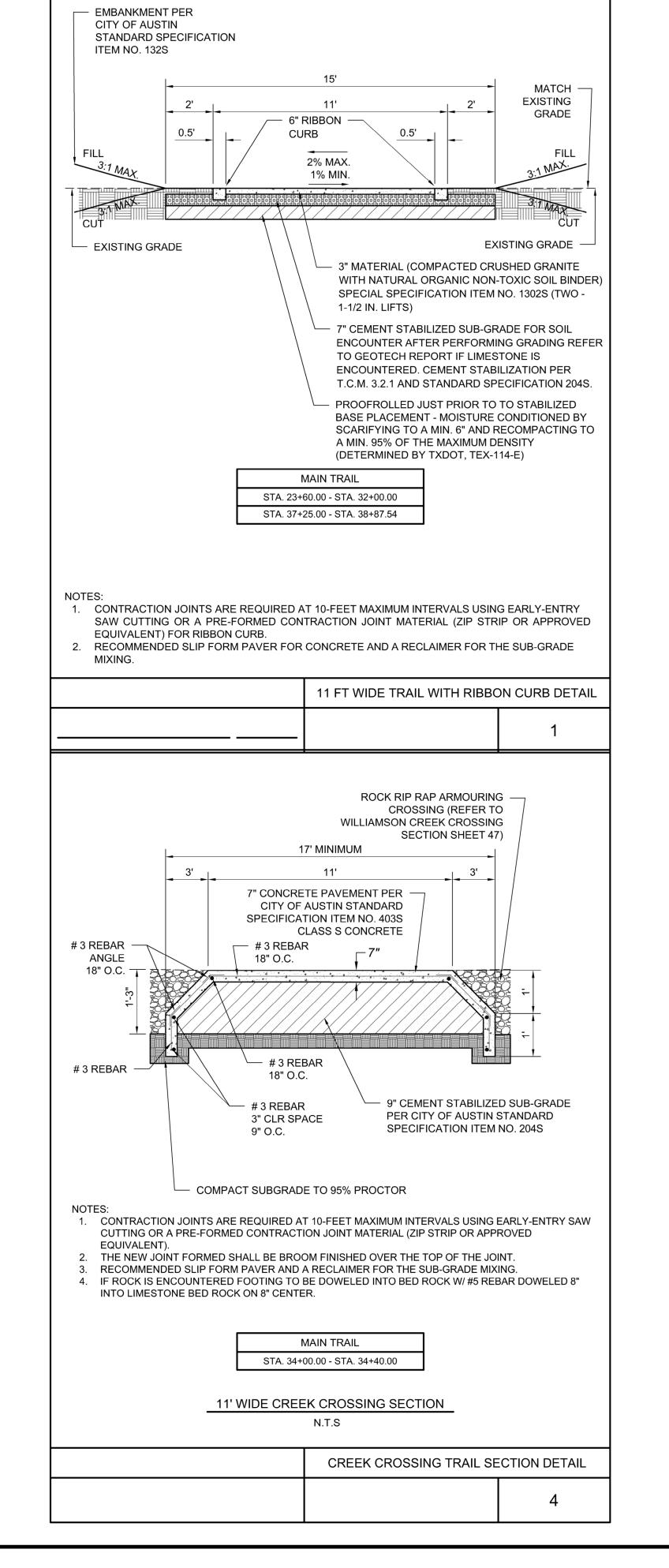


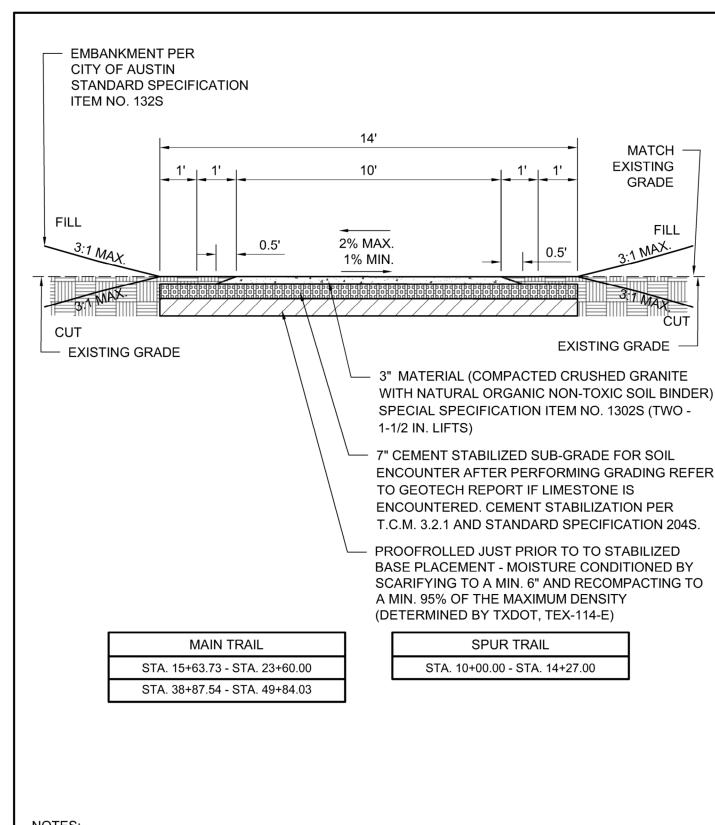
			<u>u</u>
NOTES	NAME	DATE	SI IV JO /
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ESIGNED BY	IMV	12/2015	VANA
HECKED BY	ESD	12/2015	1000
EVIEWED BY	RL	12/2015	0
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HORIZONTAL SCALE IN FEET VERTICAL SCALE IN FEET

GP-2020-0085.PW

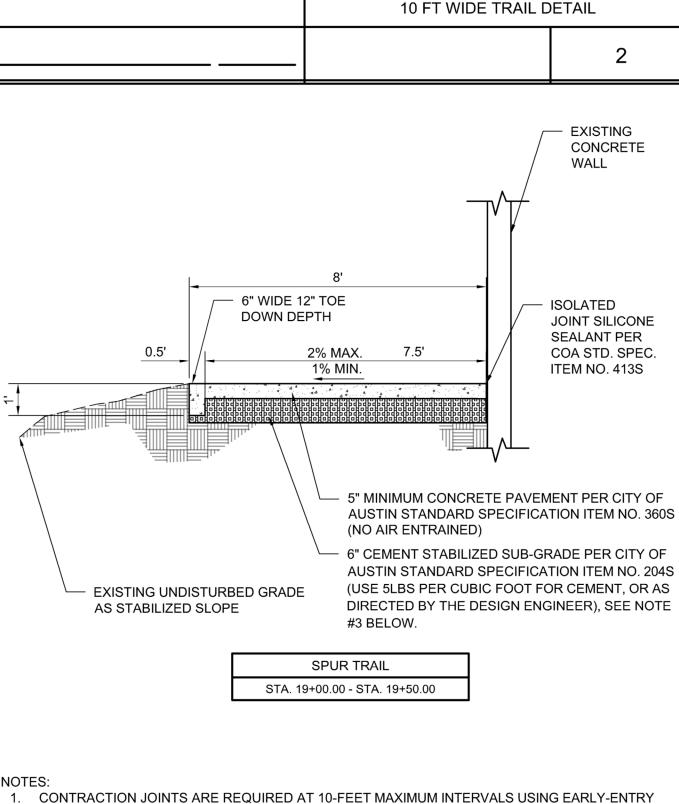
CP-215 40 OF 89





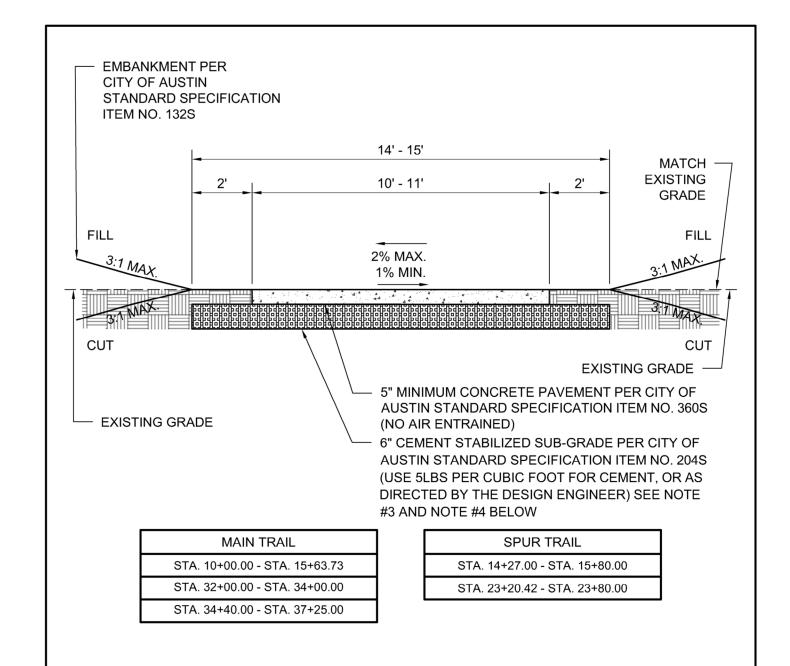
IOTES:

1. RECOMMENDED SLIP FORM PAVER FOR CONCRETE AND A RECLAIMER FOR THE SUB-GRADE MIXING.



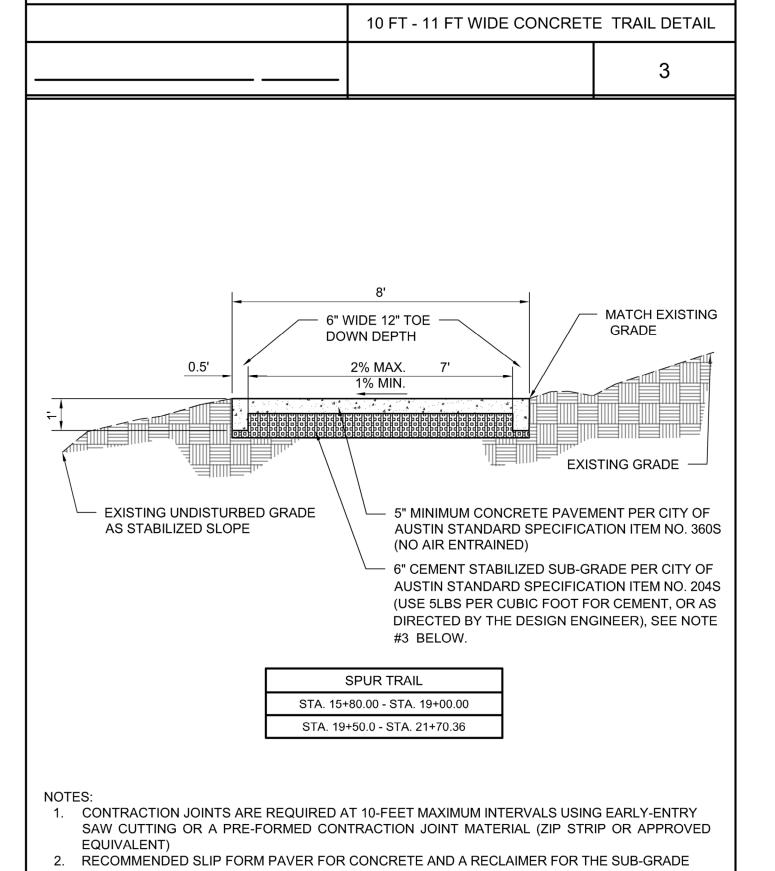
- 1. CONTRACTION JOINTS ARE REQUIRED AT 10-FEET MAXIMUM INTERVALS USING EARLY-ENTRY SAW CUTTING OR A PRE-FORMED CONTRACTION JOINT MATERIAL (ZIP STRIP OR APPROVED
- 2. RECOMMENDED SLIP FORM PAVER FOR CONCRETE AND A RECLAIMER FOR THE SUB-GRADE
- 3. LIME STABILIZED SUB-GRADE (C.O.A. ITEM NO. 203S) COULD BE USED IN-PLACE OF CEMENT STABILIZED SUB-GRADE, AS SHOWN ON THE DRAWINGS, AT THE DISCRETION OF THE ENGINEER DEPENDING ON THE PROJECT LOCATION AND SOIL CONDITIONS. THE DEPTH OF THE SUB-GRADE CAN BE MODIFIED DEPENDING ON THE GEOTECHNICAL ENGINEERING REPORT, AT THE DISCRETION OF THE ENGINEER.

8 FT WIDE CONCRETE TF	RAIL DETAIL
	5



TEQ.

- CONTRACTION JOINTS ARE REQUIRED AT 10-FEET MAXIMUM INTERVALS USING EARLY-ENTRY SAW CUTTING OR A PRE-FORMED CONTRACTION JOINT MATERIAL (ZIP STRIP OR APPROVED EQUIVALENT)
- 2. RECOMMENDED SLIP FORM PAVER FOR CONCRETE AND A RECLAIMER FOR THE SUB-GRADE MIXING
- 3. LIME STABILIZED SUB-GRADE (C.O.A. ITEM NO. 203S) COULD BE USED IN-PLACE OF CEMENT STABILIZED SUB-GRADE, AS SHOWN ON THE DRAWINGS, AT THE DISCRETION OF THE ENGINEER DEPENDING ON THE PROJECT LOCATION AND SOIL CONDITIONS. THE DEPTH OF THE SUB-GRADE CAN BE MODIFIED DEPENDING ON THE GEOTECHNICAL ENGINEERING REPORT, AT THE DISCRETION OF THE ENGINEER.
- IF USING A FILL SECTION WITH 3:1 MAXIMUM SIDE SLOPES, A SWALE (U-SHAPED) SHALL BE PROVIDED ON EACH SIDE OF THE TRAIL TO PREVENT WATER FROM ENTERING INTO THE SUB-GRADE SECTION.



3. LIME STABILIZED SUB-GRADE (C.O.A. ITEM NO. 203S) COULD BE USED IN-PLACE OF CEMENT

ENGINEER DEPENDING ON THE PROJECT LOCATION AND SOIL CONDITIONS. THE DEPTH OF THE

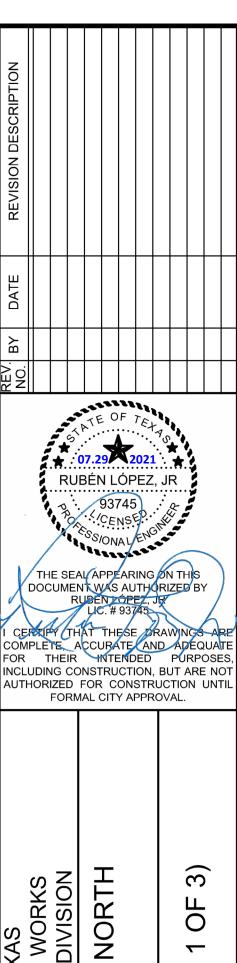
SUB-GRADE CAN BE MODIFIED DEPENDING ON THE GEOTECHNICAL ENGINEERING REPORT, AT

8 FT WIDE CONCRETE TRAIL DETAIL

6

STABILIZED SUB-GRADE, AS SHOWN ON THE DRAWINGS, AT THE DISCRETION OF THE

THE DISCRETION OF THE ENGINEER.



DETAIL SH

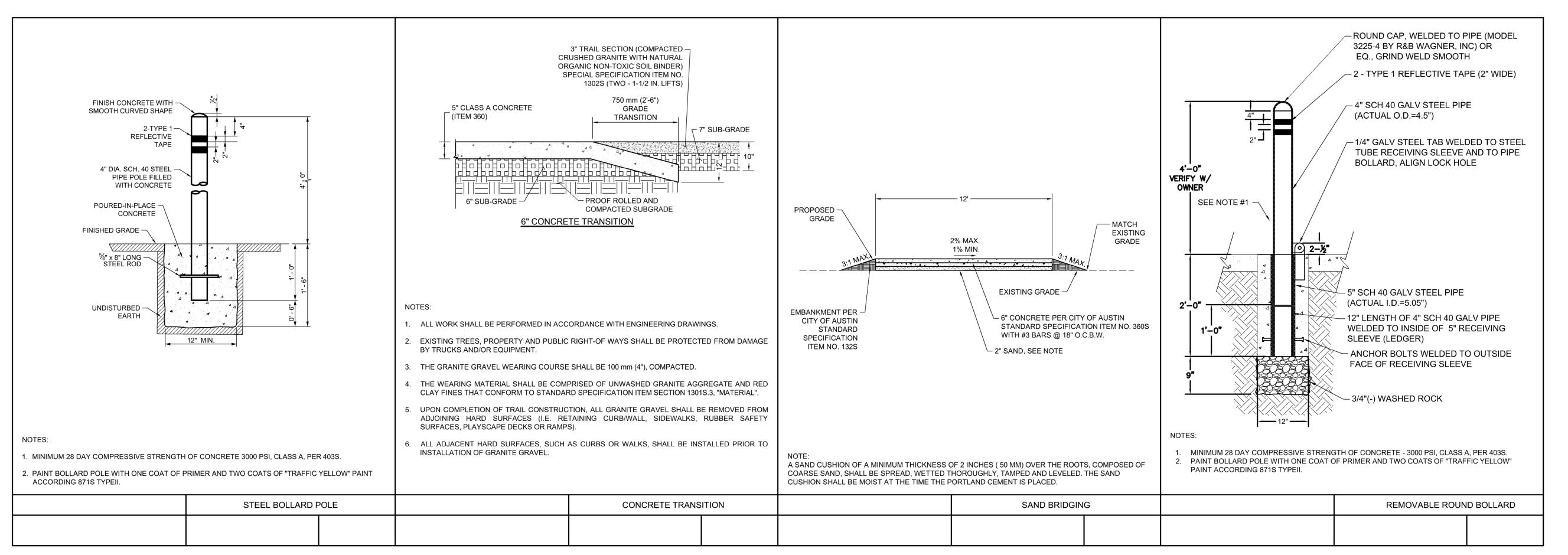
NDED								
NOTES	NAME	DATE						
SURVEY BY	QMD	12/2015						
DRAWN BY	IMV	12/2015						
DESIGNED BY	IMV	12/2015						
CHECKED BY	ESD	12/2015						
REVIEWED BY	RL	12/2015						

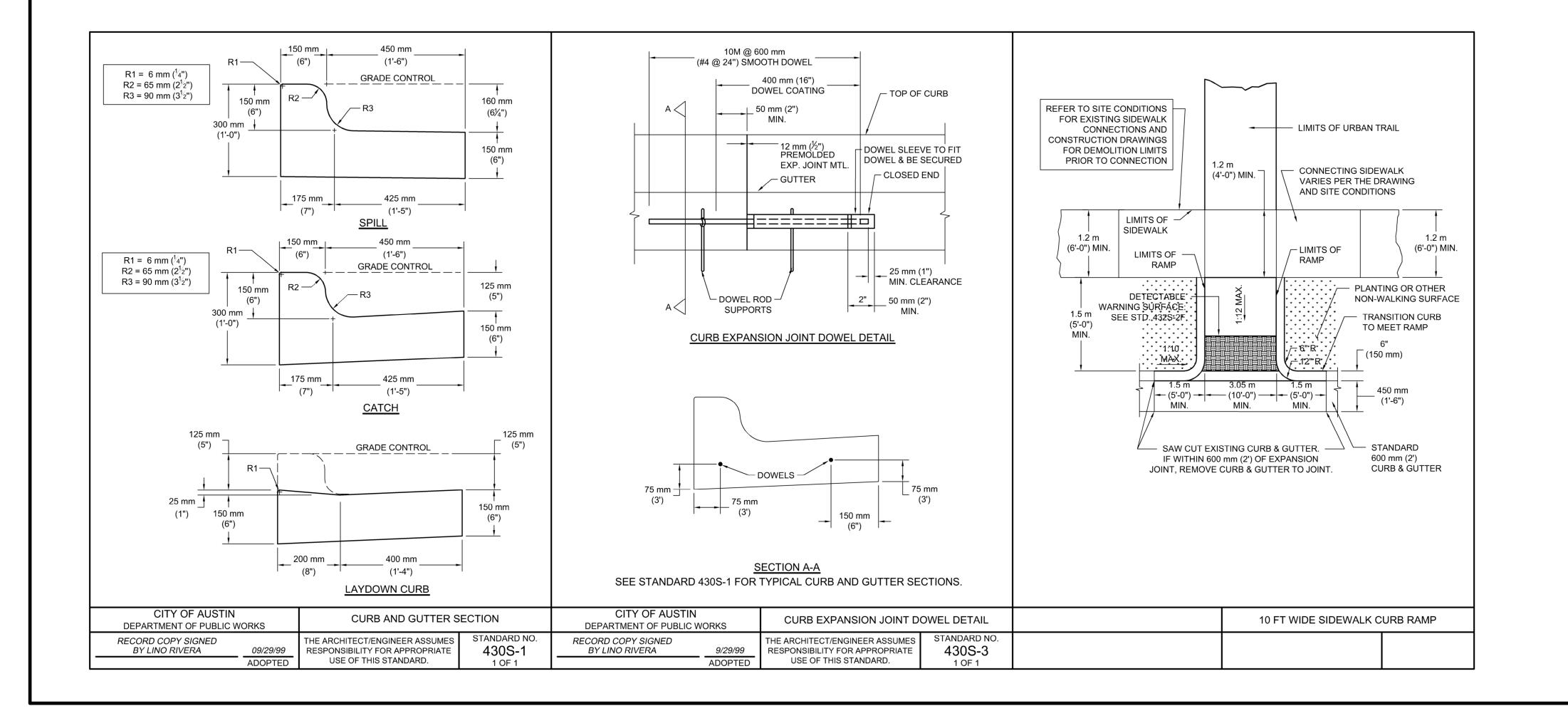
0 10 2 HORIZONTAL SCALE IN FEET 0 5 1

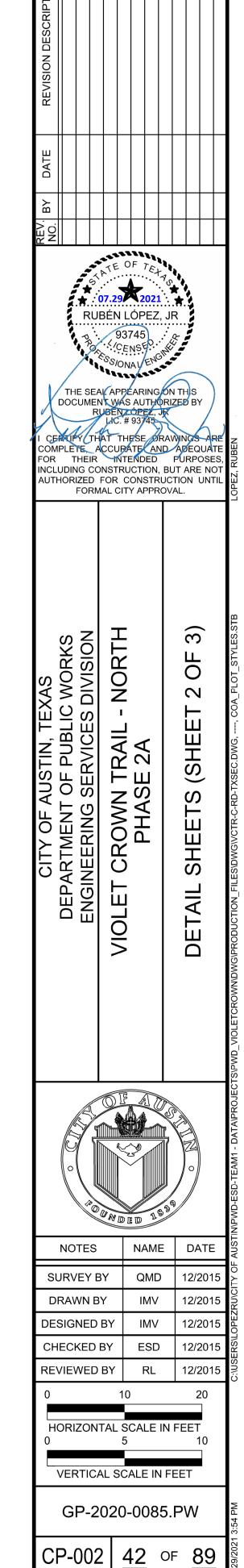
VERTICAL SCALE IN FEET

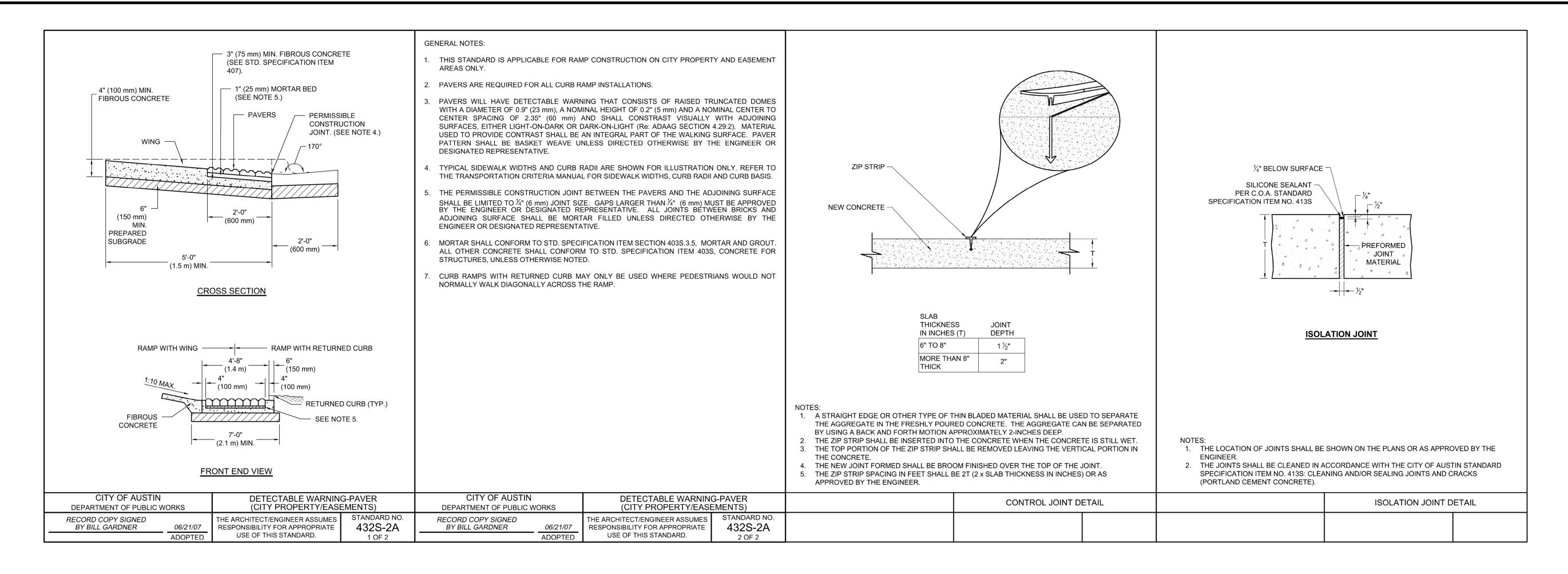
GP-2020-0085.PW

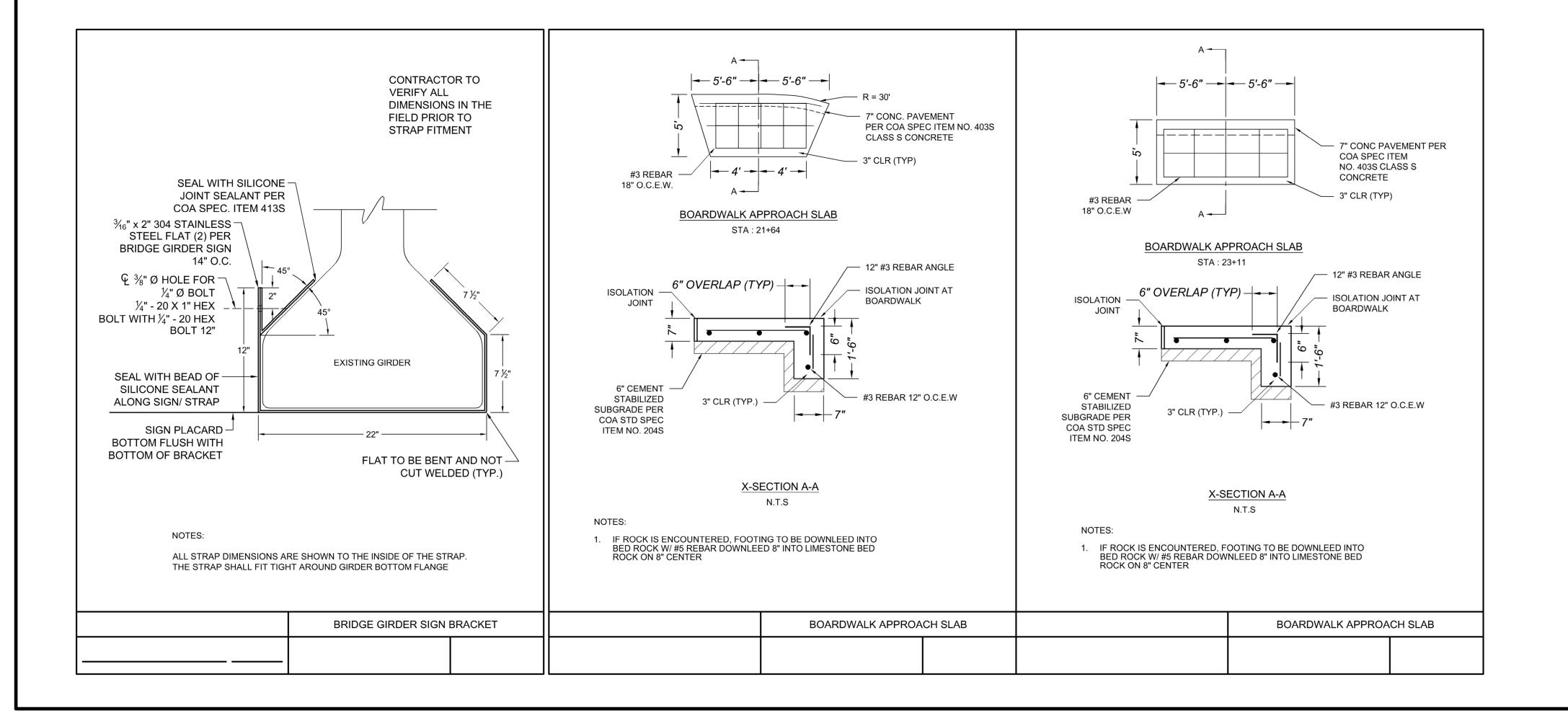
CP-001 41 OF

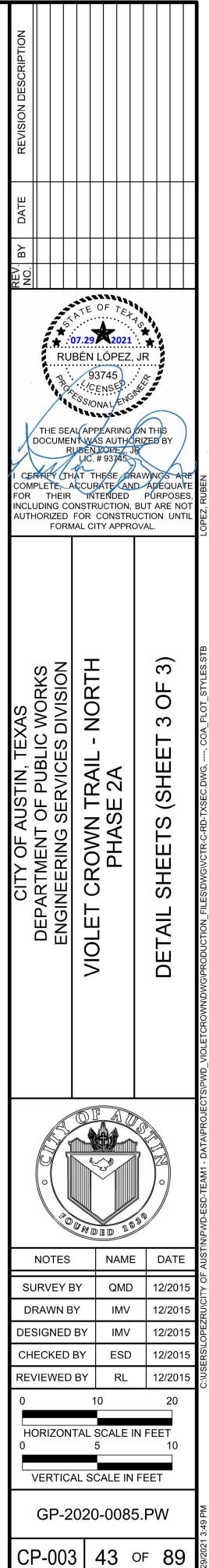


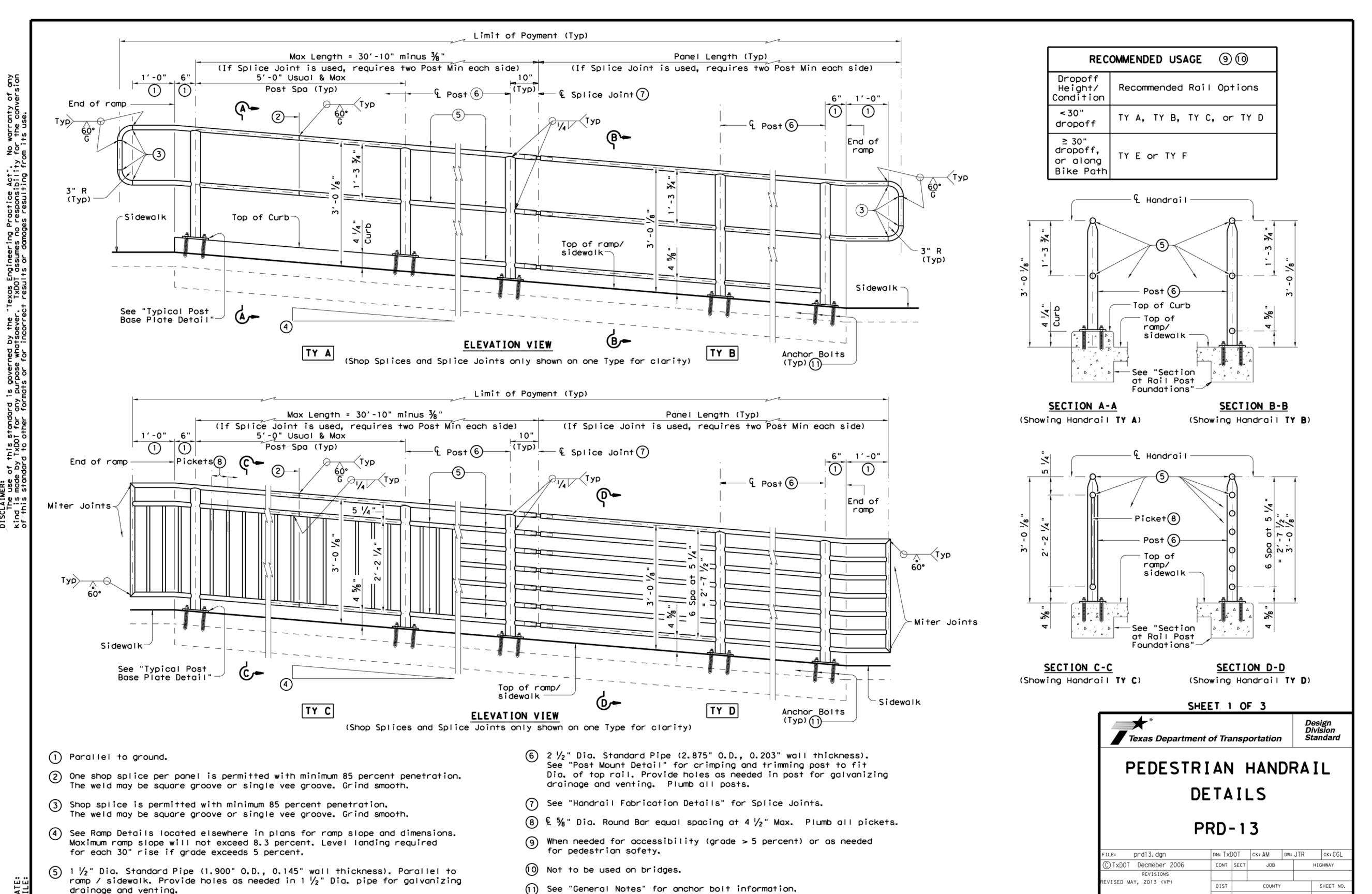












O7.27 2021

RUBÉN LÓPEZ, JR

93745

OCUMENT WAS AUTHORIZED BY
RUBÉN LÓPEZ, JR

LIC. # 93745

CHIEF CHAT THESE DRAWINGS ARE
PLETE, ACCURATE AND PURPOSES,
IDING CONSTRUCTION BUT ABE NOT

DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
VIOLET CROWN TRAIL - NORTH
PHASE 2A
RAIN HANDRAIL DETAILS (SHEET 1 OF

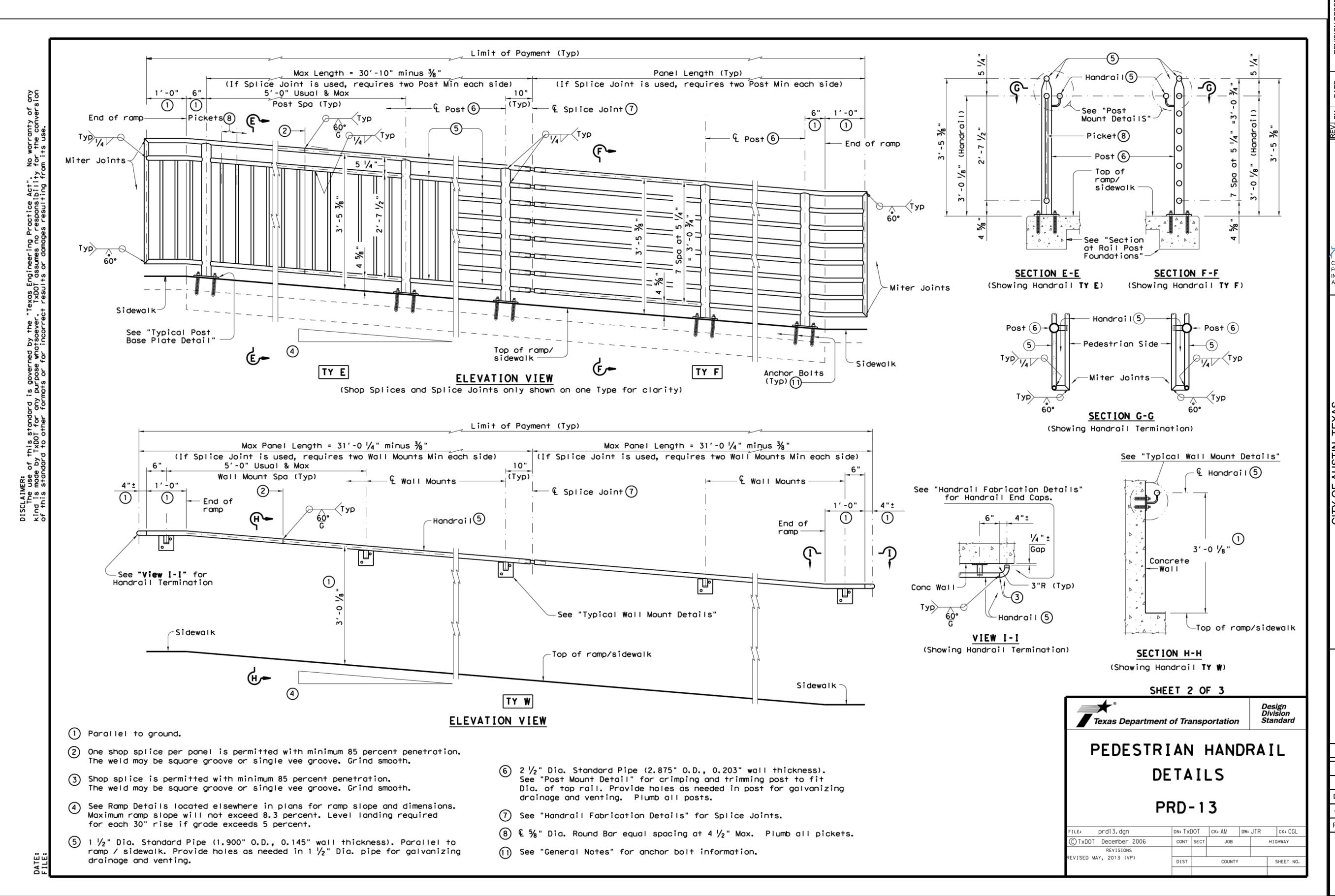
UTHORIZED FOR CONSTRUCTION UNTIL

OUNDED 1839

NOTES	NAME	DATE
SURVEY BY	QMD	12/2015
DRAWN BY	IMV	12/2015
DESIGNED BY	IMV	12/2015
CHECKED BY	ESD	12/2015
REVIEWED BY	RL	12/2015

GP-2020-0085.PW

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THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY RIBEN TO BE DOCUMENT WAS AUTHORIZED BY RIBEN FOR COMPLETE. ACCURATE AND ADEQUATE FOR THE INTENDED PURPOSES. INCLUDING CONSTRUCTION BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL FORMAL CITY APPROVAL.

DRAIL DETAILS (SHEET 2 OF 3)

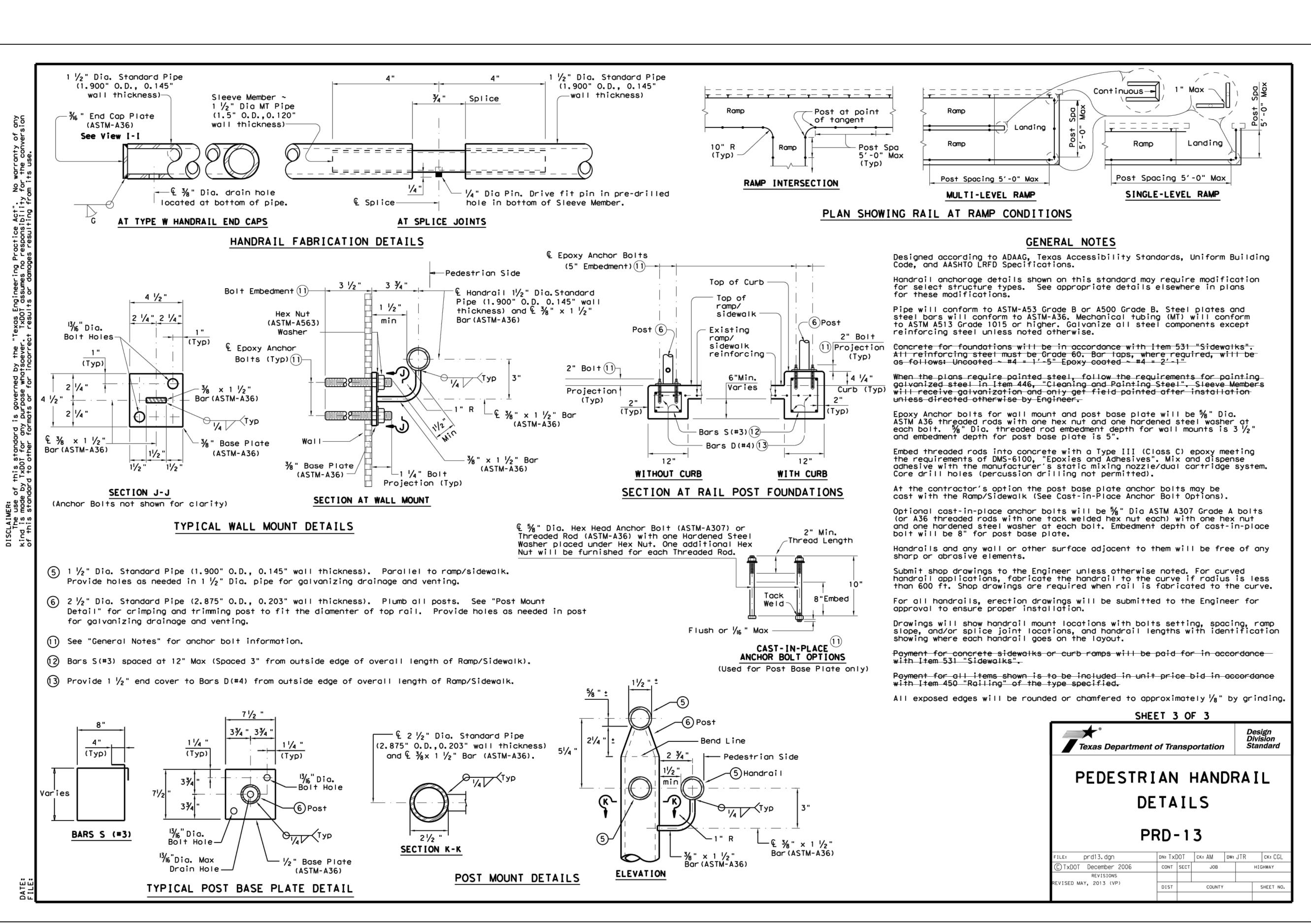
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DEPA ENGIN VIOLET

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NOTES	NAME	DATE	/ OF A
SURVEY BY	QMD	12/2015	C:\USERS\YAMAGUCHIR\CITY OF AU
DRAWN BY	IMV	12/2015	BUCH
DESIGNED BY	IMV	12/2015	AMAC
CHECKED BY	ESD	12/2015	ERS\\
REVIEWED BY	RL	12/2015	C:\US

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MON CONTROL OF TEACH OF TEACH

CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
VIOLET CROWN TRAIL - NORTH
PHASE 2A

O PAROLED 1839

NOTES NAME DATE

SURVEY BY QMD 12/2015

DRAWN BY IMV 12/2015

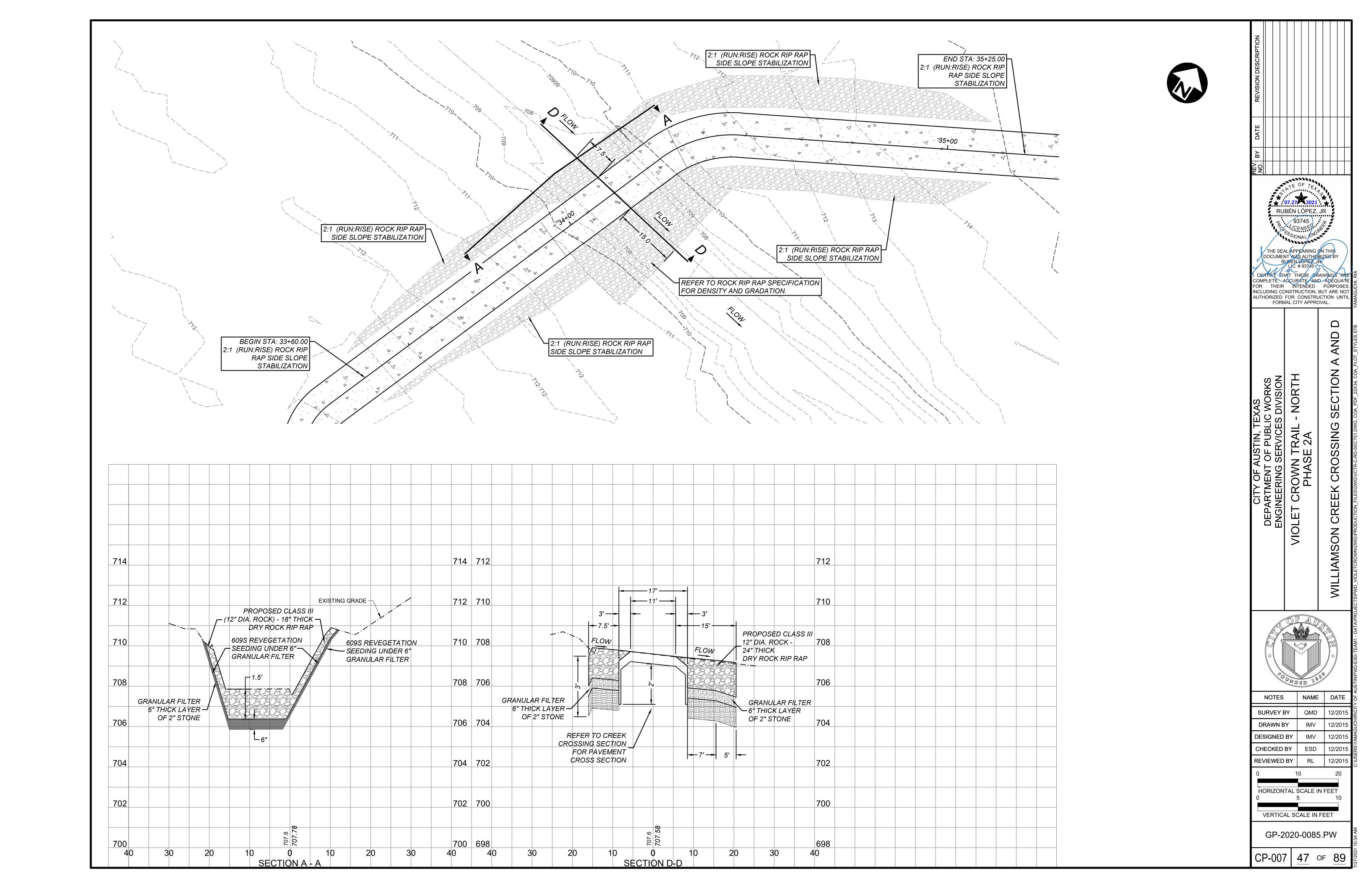
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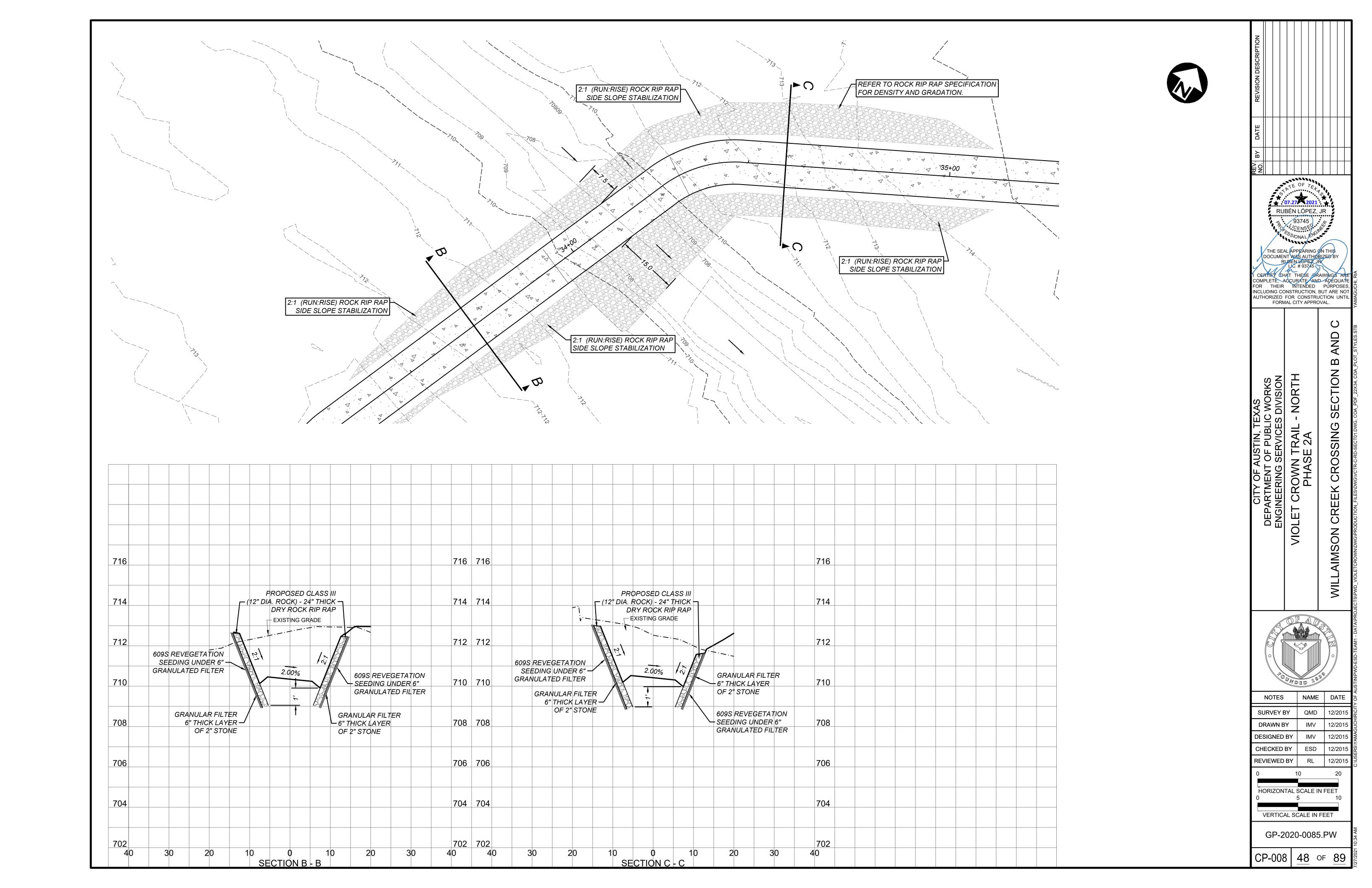
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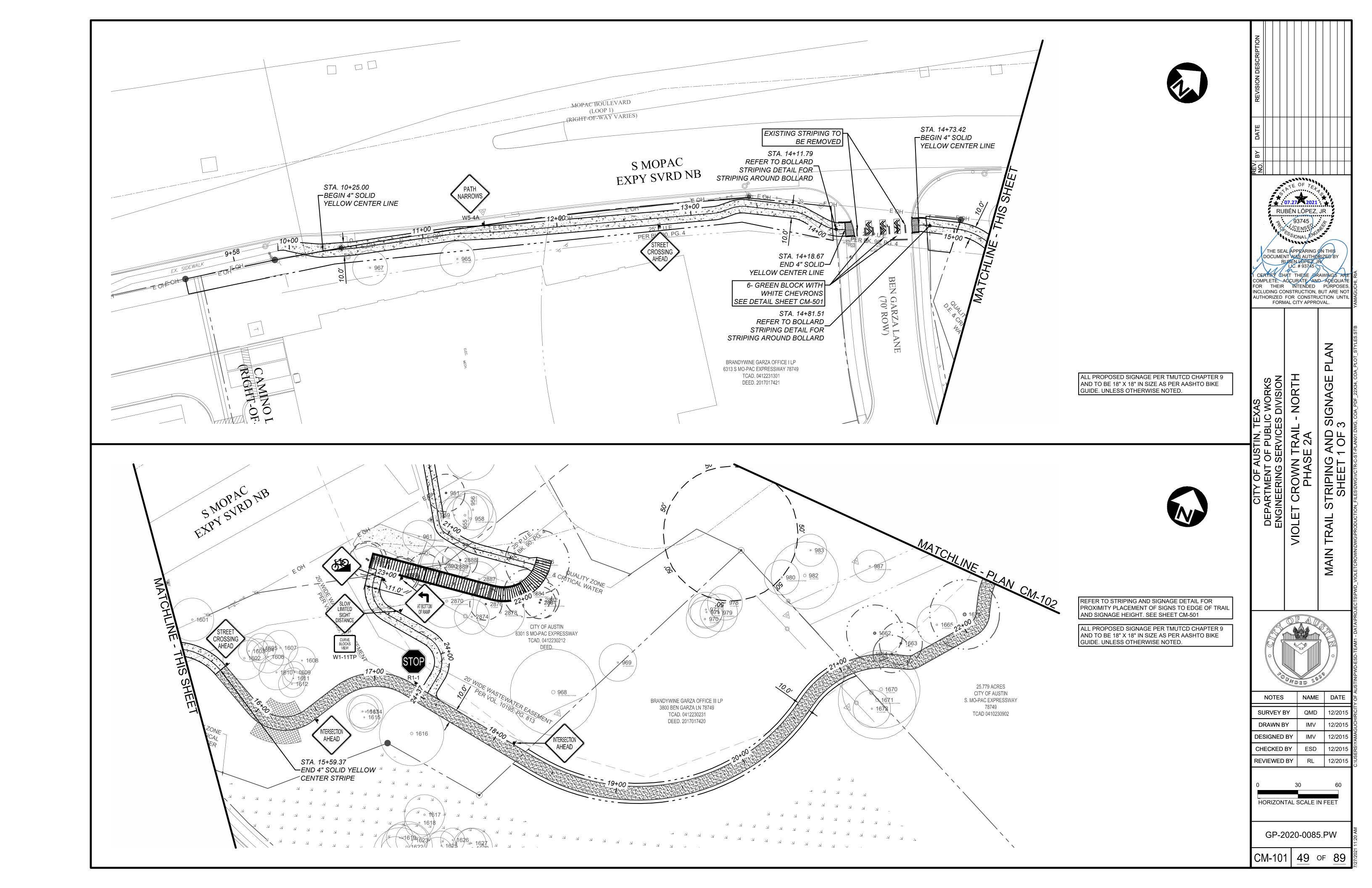
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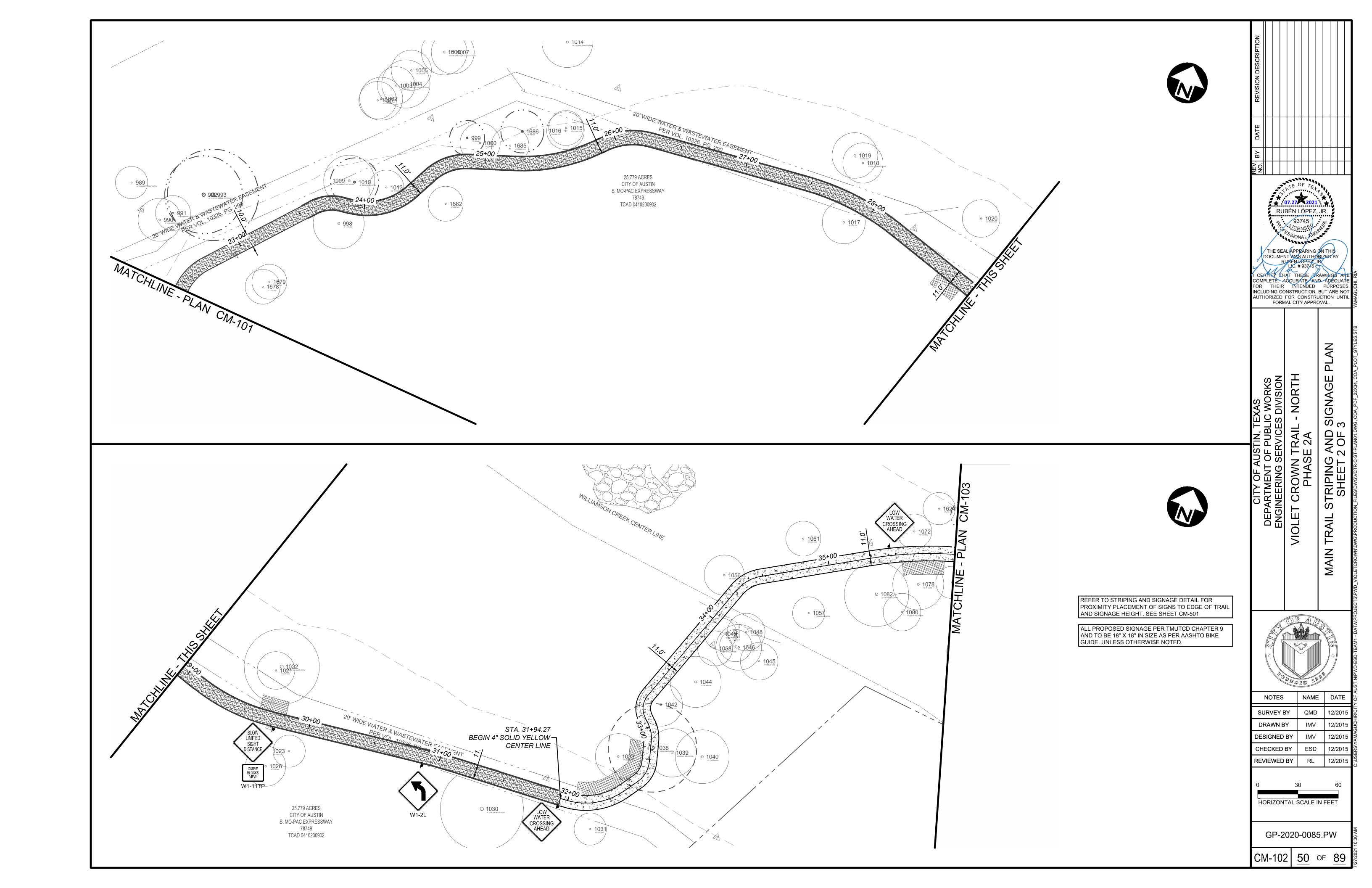
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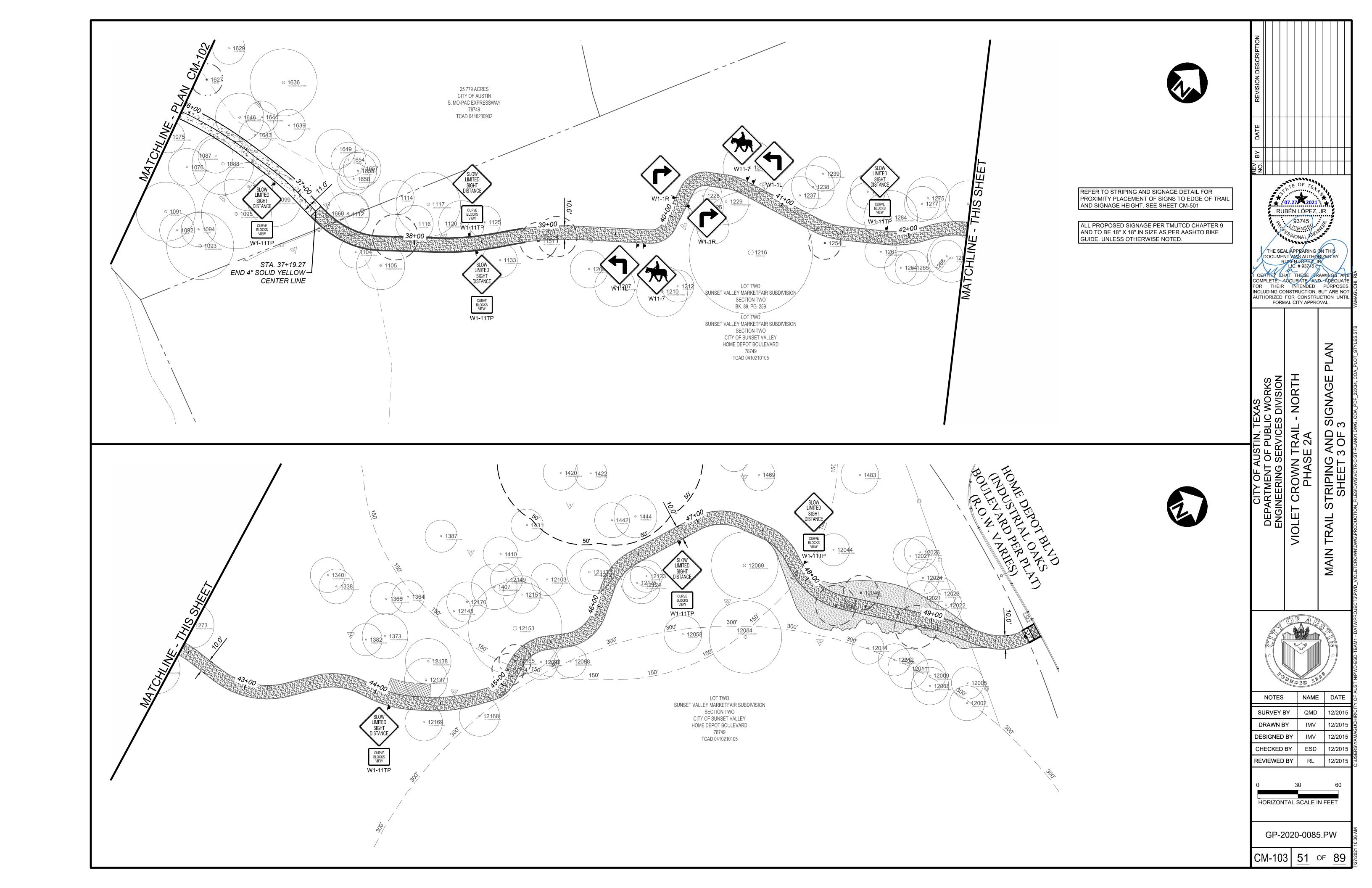
CP-006 | 46 of 89

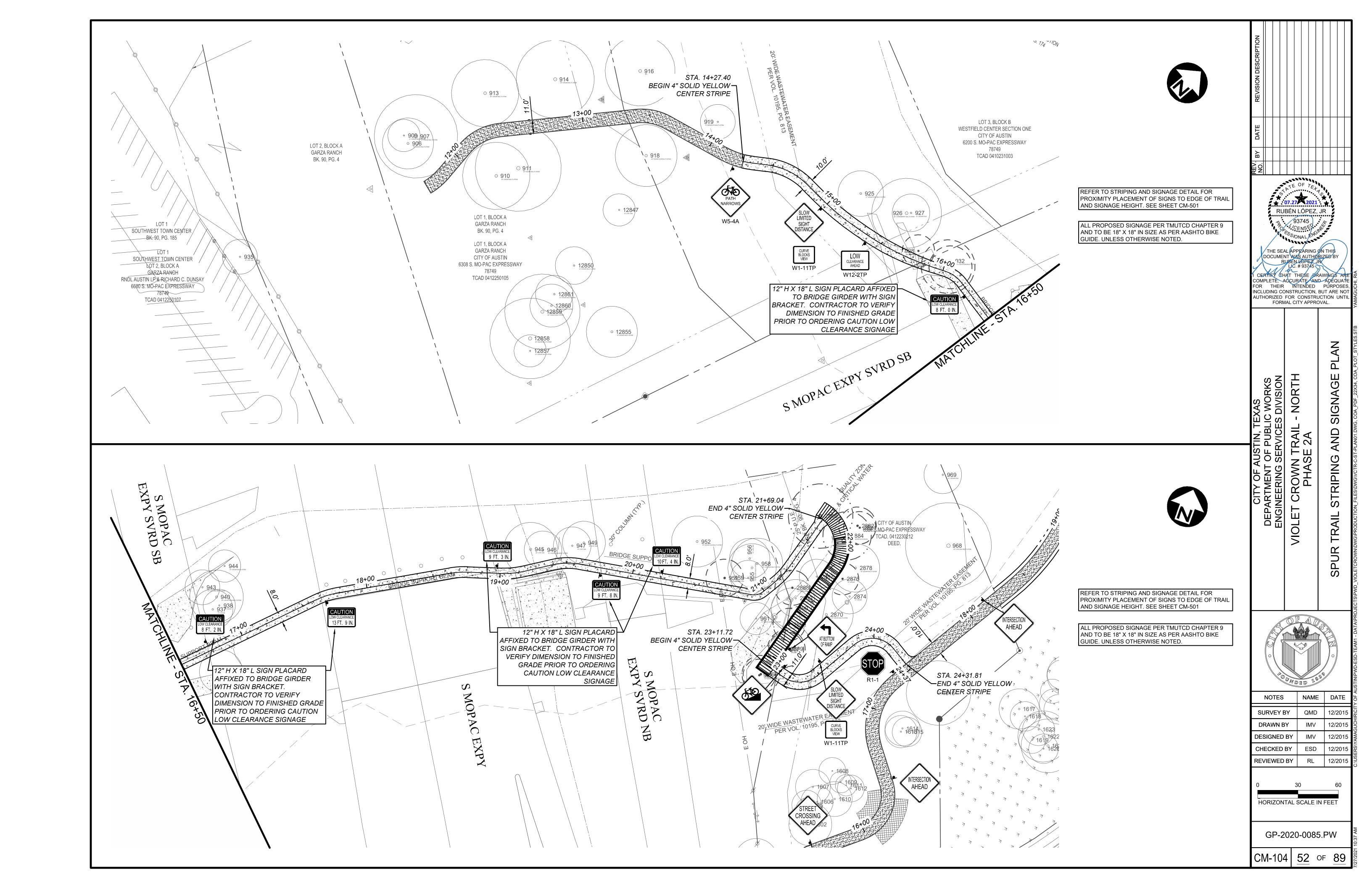


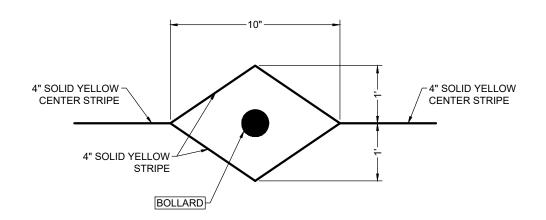




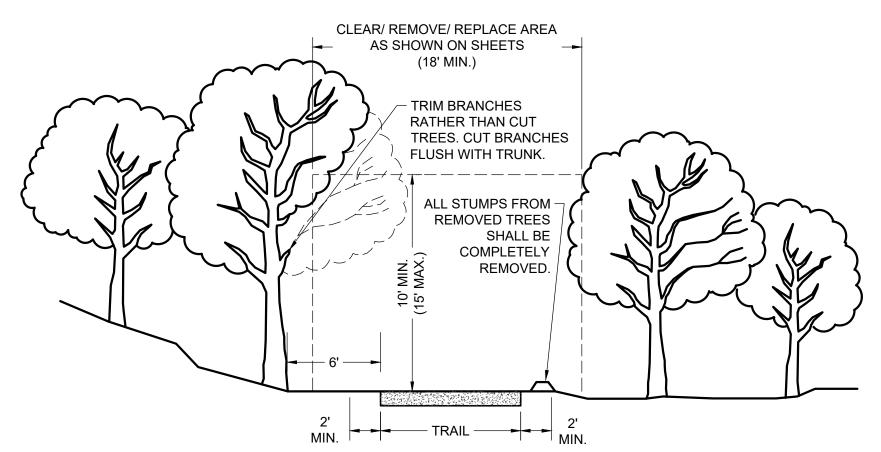






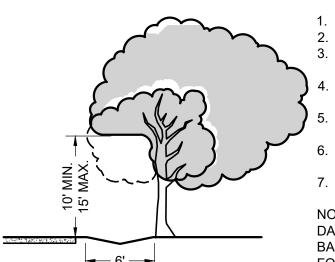


BOLLARD POST STRIPING N.T.S.



TYPICAL TRAIL CONSTRUCTION LIMITS N.T.S.

- 1. IT IS THE INTENT OF THE CITY OF AUSTIN TO MINIMIZE TREE LOSS AS A RESULT OF TRAIL CONSTRUCTION. ALL VEGETATION WITHIN LIMITED CLEARANCE AREA FOR TRAIL WILL NOT BE REMOVED OR DAMAGED UNLESS TREE TRIMMING OR GRADING IS REQUIRED. ONLY TREES DIRECTLY CONFLICTING WITH CONSTRUCTION WILL BE REMOVED, AND ONLY AT THE DIRECTION OF THE CONSTRUCTION ENGINEER.
- 2. CONTRACTOR WILL ENTER WOODEN CONSTRUCTION AREA FROM DESIGNATED ACCESS POINTS AS APPROVED BY THE CONSTRUCTION ENGINEER.
- 3. CONTRACTOR SHOULD LIMIT CONSTRUCTION EQUIPMENT TO WORKING/ CLEARING AREA ONLY TO PREVENT DAMAGE TO REMAINING TREES.
- 4. THE CONTRACTOR WILL CONSTRUCT TEMPORARY BARRICADES ALONG WORKING AREA TO PROTECT EXISTING VEGETATION, AS REQUIRED BY THE CONSTRUCTION ENGINEER.



REMOVE SUCKER SHOOTS AT BASE OF TREE MAKE CLEAN CUTS ON OLD STUBS IF PRESENT REMOVE ENTIRE SUPPLY OF TWIGS AND BUDS ON REMOVE LOWER BRANCH WHERE AN OVERLYING

BRANCH OCCUPIES APPROX. SAME AREA SHAPE TREE BY REMOVING INJURED AND MISSHAPENED BRANCHES REMOVE CROSS BRANCHES AND THOSE DEVELOPING

INTO SECONDARY LEADERS

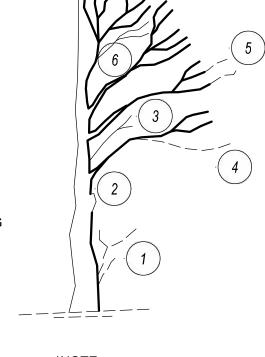
7. DO NOT REMOVE LEADER

DASHED LINES INDICATE BRANCHES TO BE REMOVED. BALD CYPRESS - NO MORE THAN 20 PERCENT OF LIMBS. FOLIAGE. ETC. TO BE REMOVED.

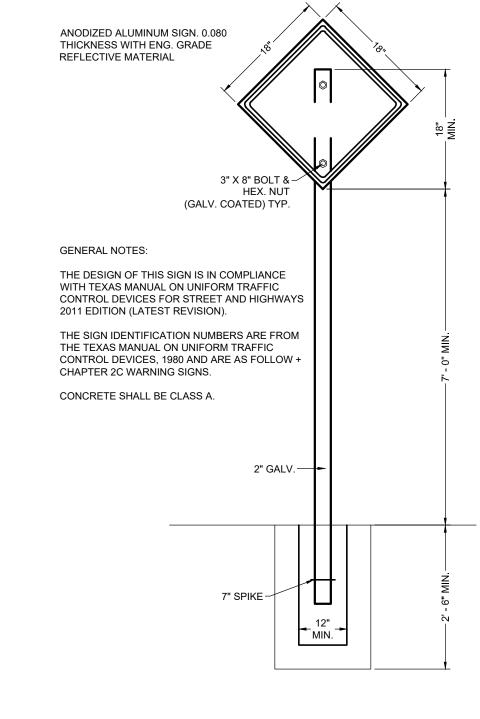
COINCIDENTAL.

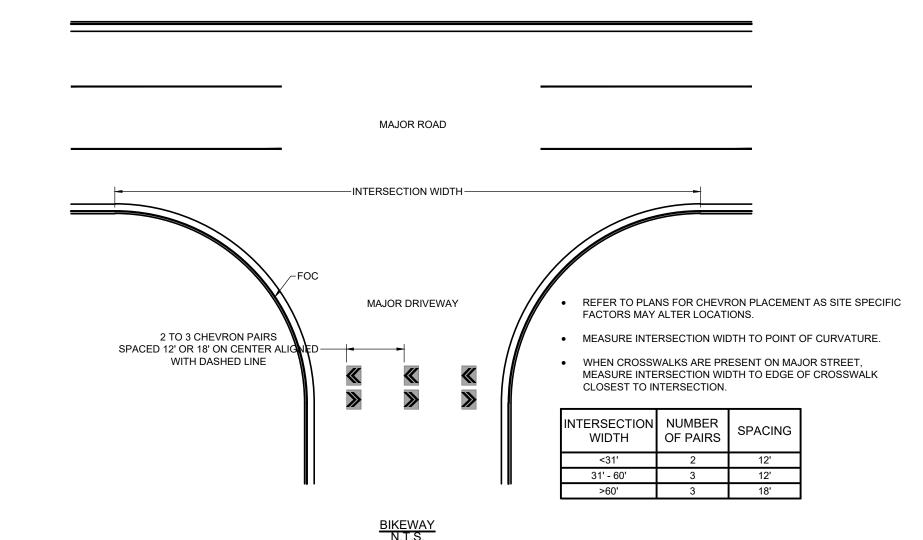
TO REMOVE LOW HANGING BRANCHES ONLY

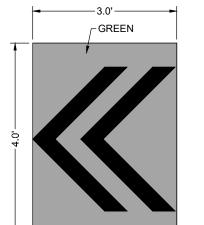
TREES OR TREES WITH LIMBS TO REMAIN TYPICAL TREE PRUNING DETAILS WITHIN CLEAR ZONE WILL BE PRUNED BY A PROFESSIONAL ARBORIST. LIMBS WILL BE N.T.S. PRUNED TO A MAX HEIGHT OF 15' TO CLEAR CONSTRUCTION ACTIVITIES AND AS REQUIRED TO CLEAR DRIVING SURFACE BY HEIGHT OF 15'. CARE SHOULD BE TAKEN NOT

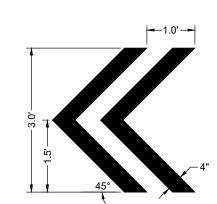


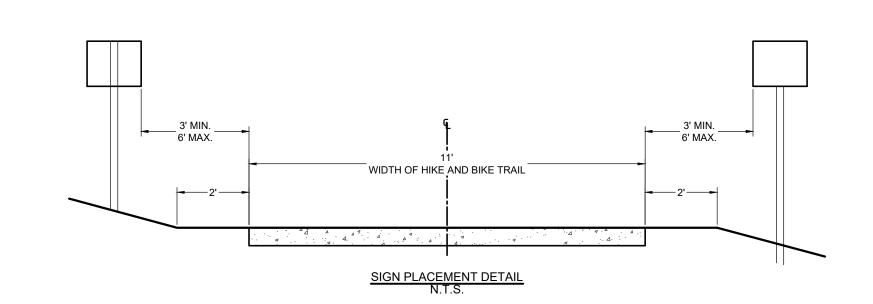
NOT A SEPARATE PAY ITEM, SUBSIDIARY TO CITY OF AUSTIN SPECIFICATION ITEM No. 101S, PREPARING RIGHT OF WAY.

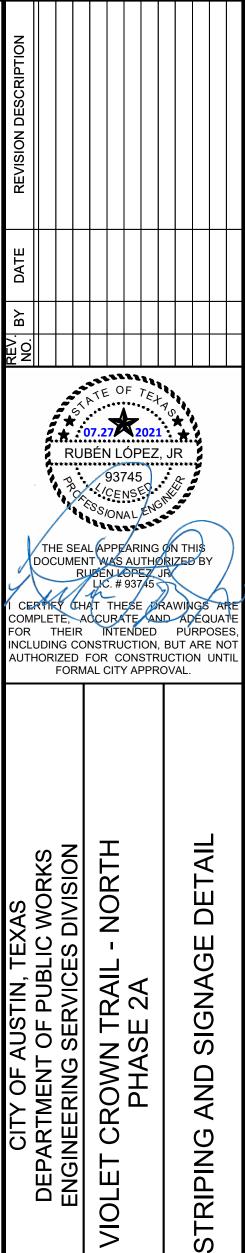


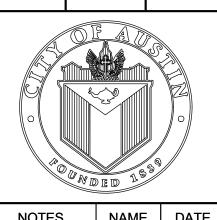












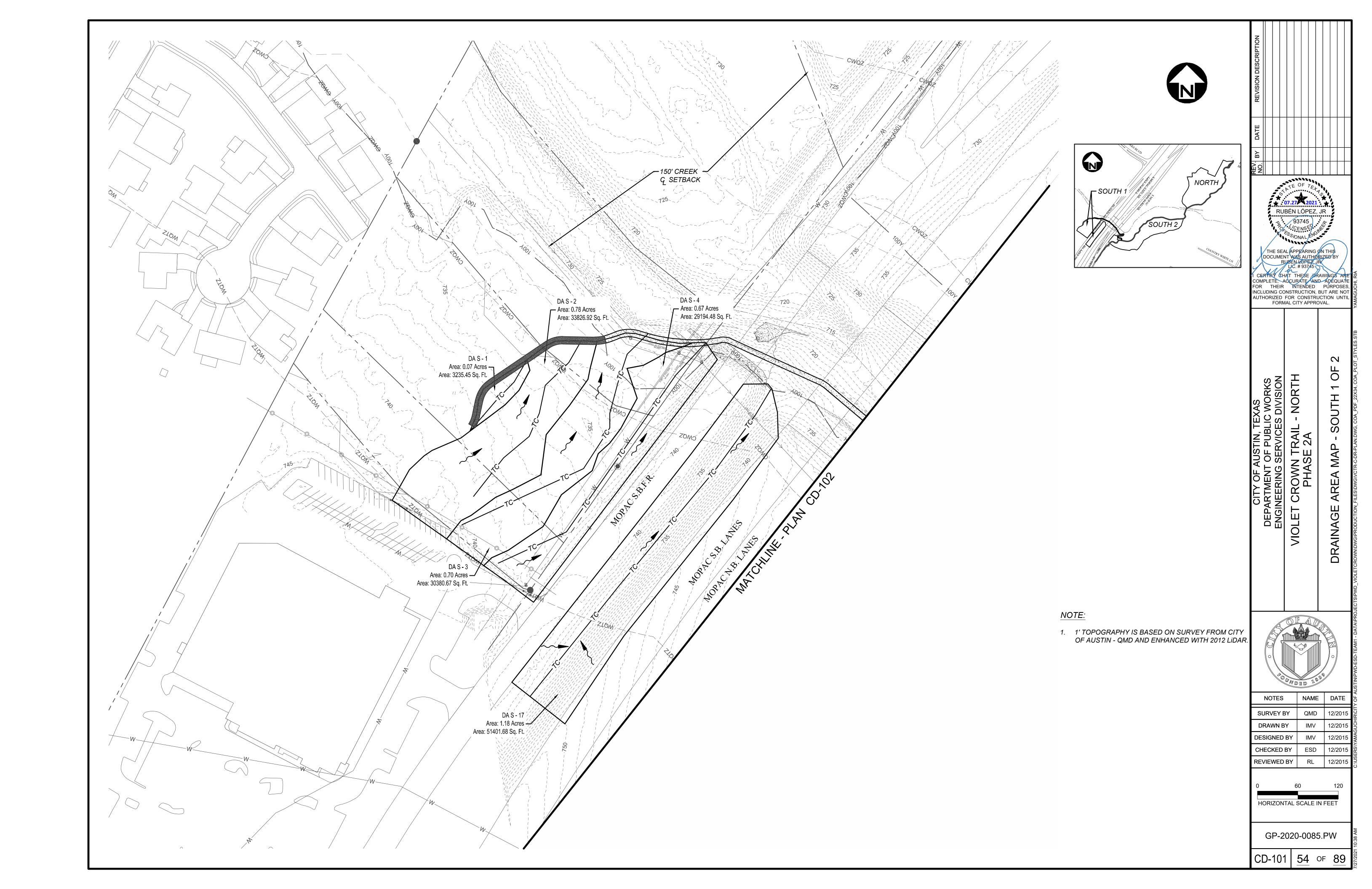
NOTES	NAME	DATE	P
SURVEY BY	QMD	12/2015	C:\USERS\YAMAGUCHIR\CITY
DRAWN BY	IMV	12/2015	BUCH
DESIGNED BY	IMV	12/2015	/AMA
CHECKED BY	ESD	12/2015	ERS\\
REVIEWED BY	RL	12/2015	C:\US
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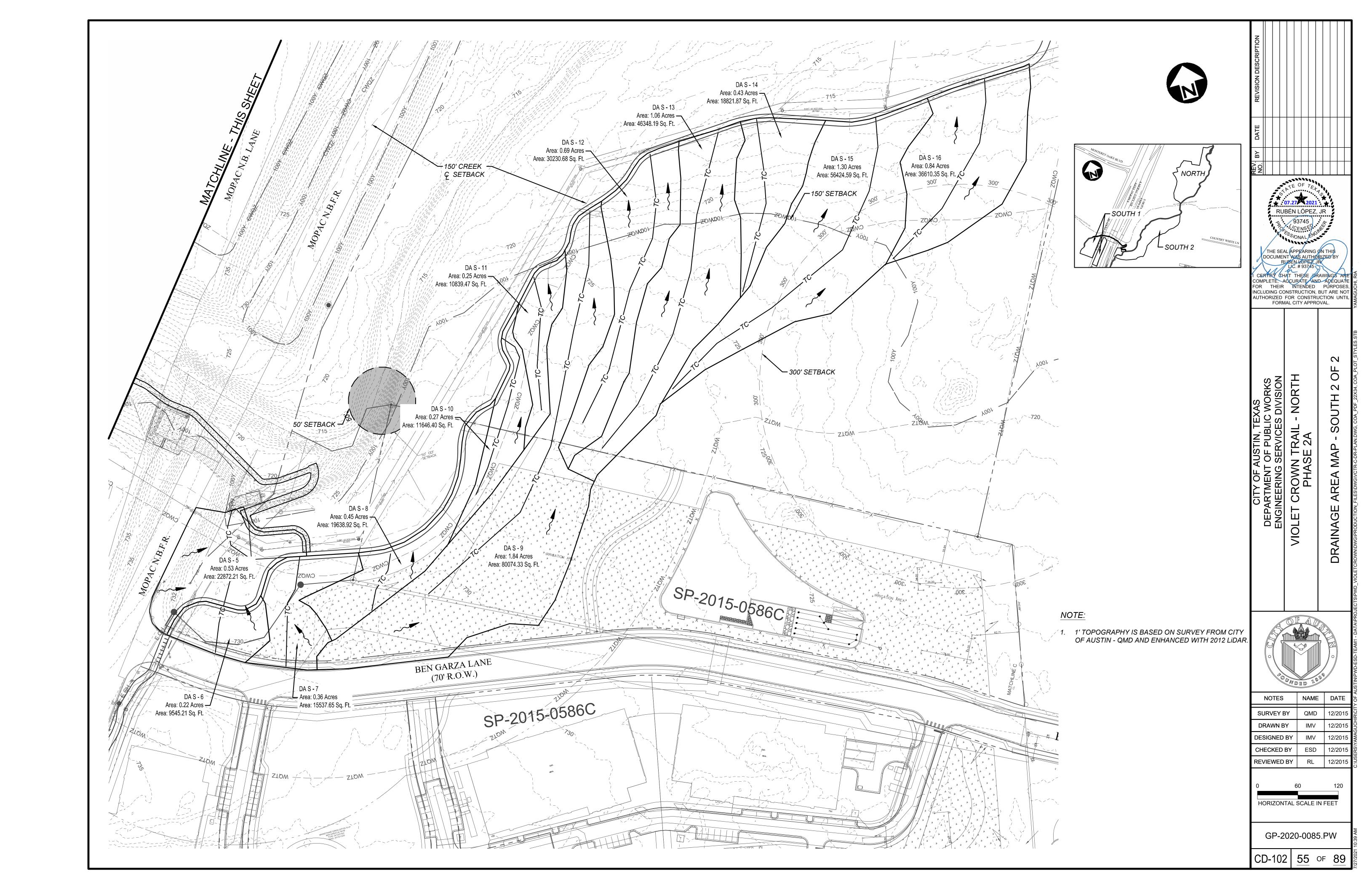


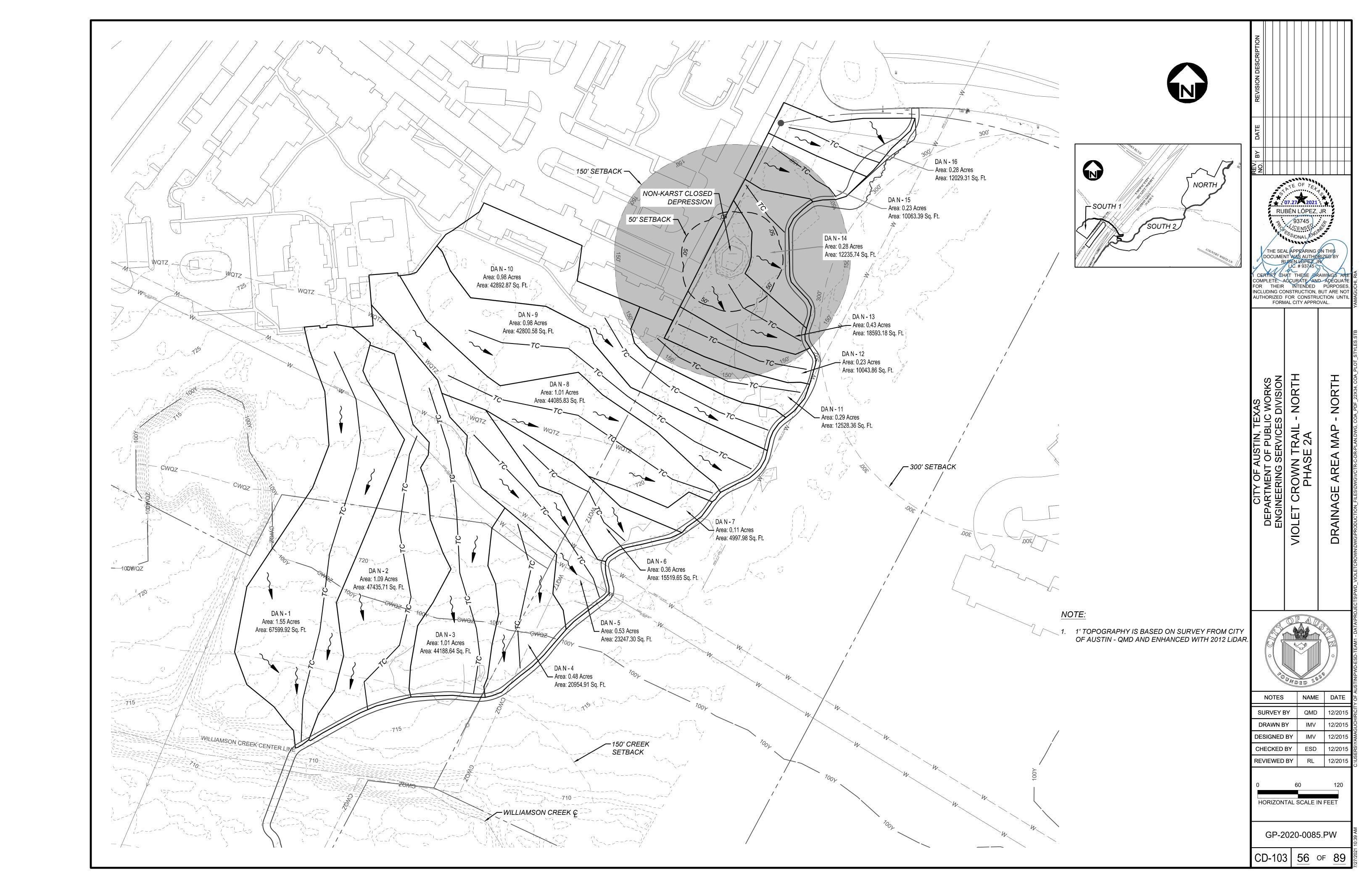
Engineering Services DIVISION

GP-2020-0085.PW

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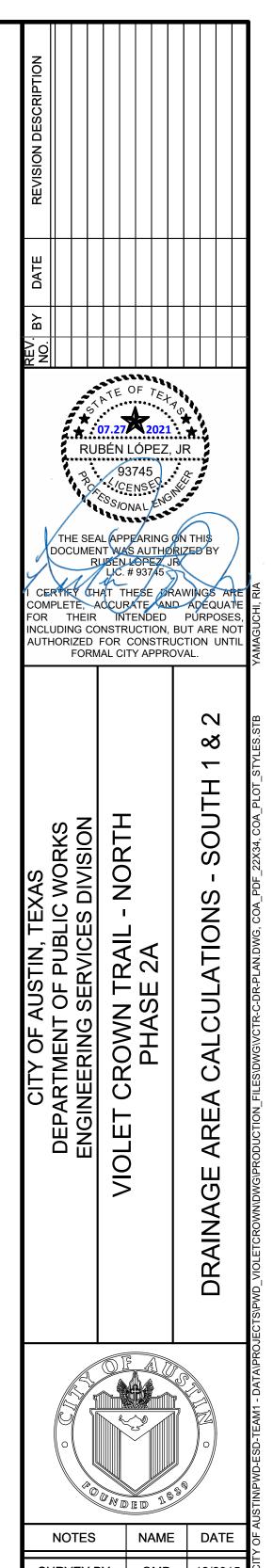


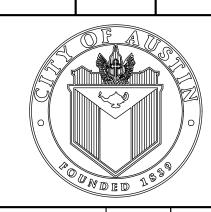




TORM FREQ	JUENCY	.=	a	b	C		i=a/(t+b)	···C				
		2	54.767	11.051	0.8116		Q=CiA					
		10	70.82	10.396	0.7725							
		25	82.936	10.746	0.7634		Legend					
		100	118.3	13.185	0.7736			Watch out! No. must be 10	0			
								Should not be changed				
ROJECT NAI	ME:	٧	IOLET CRO	WN TRAIL		Prepared I	Ву:	rlj	Date:	12/12/19 9:25 A	M	
ROJECT NO.		60	OBA024ESI)		File name:	: \\coacd.org	\dfs\PWDESD\Team1\PWD_VIoletCro	wn\Eng_Analys	sis_Drainage Calc	ulations\[Drain:	age Calcula
AREA	S-1								co	OMPOSITE C C	ALCULATIO	NS
Event	2-yr		10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-y
Acres	0.07		0.07	0.07	0.07				-		-	
С	0.31		0.36	0.40	0.47	0.07	100.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
Tc	30.83		30.83	30.83	30.83	0.00	0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
10								•				
ı	2.64		4.00	4.82	6.33	0.00	0.0	Concrete	0.75	0.83	0.88	0.97
						0.00	0.0	Asphalt	0.73	0.81	0.86	0.95
Q	0.06		0.11	0.14	0.22	0.07	100		0.31	0.36	0.40	0.47
AREA	S-2								co	OMPOSITE C C	ALCULATION	NS
Event	S-10		10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-y
Acres	0.78		0.78	0.78	0.78	,			r·	,-	1 ·	1
C	0.73		0.76	0.70	0.73	0.78	100.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
								•				
Tc	34.43		34.43	34.43	34.43	0.00	0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
I	2.47		3.75	4.52	5.96	0.00	0.0	Concrete	0.75	0.83	0.88	0.97
						0.00	0.0	Asphalt	0.73	0.81	0.86	0.95
Q	0.60		1.05	1.40	2.17	0.78	100	1	0.31	0.36	0.40	0.47
AREA	S-3								co	OMPOSITE C C	ALCULATION	NS
Event	N-3		10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-y
Acres	0.70		0.70	0.70	0.70				<u> </u>	-	•	
C	0.31		0.36	0.40	0.47	0.70	100.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
Tc	35.36		35.36	35.36	35.36	0.00	0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
10						0.00	0.0	Concrete				0.40
I	2.43		3.69	4.45	5.87				0.75	0.83	0.88	
Q	0.53		0.93	1.24	1.92	0.00 0.70	100	Asphalt	0.73 0.31	0.81 0.36	0.86 0.40	0.95 0.47
			0.33			V.7 V	100	1				
AREA	S-4		10	25	100	- 				OMPOSITE C.C.		
Event	N-13		10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-у
Acres	0.67		0.67	0.67	0.67							
С	0.31		0.36	0.40	0.47	0.67	100.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
Tc	30.66		30.66	30.66	30.66	0.00	0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
I	2.65		4.02	4.83	6.35	0.00	0.0	Concrete	0.75	0.83	0.88	0.97
	.		_ 	-		0.00	0.0	Asphalt	0.73	0.81	0.86	0.95
Q	0.55		0.97	1.30	2.00	0.67	100	, top nate	0.73	0.36	0.40	0.33
AREA	S-17		10	25	100	8.00=0	01	F		OMPOSITE C C		
Event	0		10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-у
Acres	1.18		1.18	1.18	1.18							
C	0.33		0.39	0.43	0.50	0.00	0.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
Tc	25.65		25.65	25.65	25.65	1.08	91.2	Grass/Good 2-7%	0.29	0.35	0.39	0.46
1	2.94		4.44	5.33	6.98	0.00	0.0	Concrete	0.75	0.83	0.88	0.97
						0.10	8.8	Asphalt	0.73	0.81	0.86	0.95
Q	1.14		2.05	2.71	4.14	1.18	100	<u> </u>	0.33	0.39	0.43	0.50
4 DE 4									-			
AREA Event	S-5		10	2F v~	100 100	ACDEC	n/			OMPOSITE C C.		
Event	0		10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-y
Acres	0.31		0.31	0.31	0.31							
C	0.29		0.35	0.39	0.46	0.00	0.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
Tc	30.66		30.66	30.66	30.66	0.31	100.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
1	2.65		4.02	4.83	6.35	0.00	0.0	Concrete	0.75	0.83	0.88	0.97
-						0.00	0.0	Asphalt	0.73	0.81	0.86	0.95
	0.24		0.43	0.58	0.90	0.31	100	, topinals	0.79	0.35	0.39	0.46
Q	11 //											

-												
+	AREA	S-6								COMPOSITE C CA	ALCULATION	V5
	Event	0	10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-yr
- 1	Acres	0.32	0.32	0.32	0.32							
	С	0.31	0.36	0.40	0.47	0.32	100.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
	Tc	25.65	25.65	25.65	25.65	0.00	0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
	1	2.94	4.44	5.33	6.98	0.00	0.0	Concrete	0.75	0.83	0.88	0.97
	-				0.00	0.00	0.0	Asphalt	0.73	0.81	0.86	0.95
	Q	0.29	0.50	0.67	1.04	0.32	100	Asphalt	0.31	0.36	0.40	0.47
	Q	0.23	0.50	0.07	1.04	0.32	100	<u> </u>	0.31	0.30	0.40	0.47
+	AREA	S-7								COMPOSITE C CA	ALCHII ATION	us.
+	Event	0	10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-yr
+		0.40	0.40	0.40	0.40	ACILI	70	LVEIIL	Z- yı	10-yı	2J- yı	100-yı
	Acres					0.40	400.0	F . /IV II I 2 70/	0.24	0.36	0.40	0.47
	С	0.31	0.36	0.40	0.47	0.40	100.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
	Tc	36.40	36.40	36.40	36.40	0.00	0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
	l	2.39	3.63	4.38	5.77	0.00	0.0	Concrete	0.75	0.83	0.88	0.97
						0.00	0.0	Asphalt	0.73	0.81	0.86	0.95
	Q	0.29	0.52	0.70	1.08	0.40	100		0.31	0.36	0.40	0.47
								•				
T	AREA	S-8								COMPOSITE C CA	ALCULATION	NS
T	Event	0	10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-yr
t	Acres	0.45	0.45	0.45	0.45							
	C	0.43	0.45	0.40	0.43	0.45	100.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
								·				
	Тс	36.06	36.06	36.06	36.06	0.00	0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
	ı	2.40	3.65	4.40	5.80	0.00	0.0	Concrete	0.75	0.83	0.88	0.97
						0.00	0.0	Asphalt	0.73	0.81	0.86	0.95
	Q	0.34	0.59	0.79	1.23	0.45	100		0.31	0.36	0.40	0.47
								-				
+	AREA	S-9								COMPOSITE C CA	ALCULATION	NS
+	Event	0	10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-yr
+						ACRES	70	EVEIIL	2-yr	TO- AL	23*YF	TOO-AL
	Acres	1.84	1.84	1.84	1.84			Page Abor 19 10 10 10		. .	<u> </u>	<u></u>
	С	0.31	0.36	0.40	0.47	1.84	100.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
	Tc	40.46	40.46	40.46	40.46	0.00	0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
	1	2.23	3.40	4.11	5.43	0.00	0.0	Concrete	0.75	0.83	0.88	0.97
						0.00	0.0	Asphalt	0.73	0.81	0.86	0.95
	Q	1.27	2.25	3.02	4.69	1.84	100	·	0.31	0.36	0.40	0.47
	~					1.07				2.50	5.70	J. 11
+	AREA	S-10								COMPOSITE C CA		ııc
ł							n/					
+	Event	0	10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-yr
	Acres	0.27	0.27	0.27	0.27							
	С	0.31	0.36	0.40	0.47	0.27	100.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
	Tc	40.46	40.46	40.46	40.46	0.00	0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
	ı	2.23	3.40	4.11	5.43	0.00	0.0	Concrete	0.75	0.83	0.88	0.97
						0.00	0.0	Asphalt	0.73	0.81	0.86	0.95
	0	0.19	0.33	0.44	0.68	0.27	100	T Spridic	0.31	0.36	0.40	0.47
	Q	0.19	0.55	U.44	0.08	0.27	100		0.51	0.30	0.40	0.47
+												
ļ	AREA	S-11								COMPOSITE C CA		
1	Event	0	10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-yr
	Acres	0.25	0.25	0.25	0.25							
	С	0.31	0.36	0.40	0.47	0.25	100.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
	Tc	65.35	65.35	65.35	65.35	0.00	0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
	1	1.62	2.50	3.04	4.05	0.00	0.0	Concrete	0.75	0.83	0.88	0.40
	1	1.62	2.50	3.04	4.05							
	_					0.00	0.0	Asphalt	0.73	0.81	0.86	0.95
	Q	0.13	0.22	0.30	0.47	0.25	100	1	0.31	0.36	0.40	0.47
1												
	AREA	S-12								COMPOSITE C CA	ALCULATION	NS
	Event	0	10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-yr
T	Acres	0.69	0.69	0.69	0.69							
	С	0.31	0.36	0.40	0.47	0.69	100.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
	Tc	54.23	54.23	54.23	54.23	0.00	0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
	1	1.84	2.83	3.43	4.55	0.00	0.0	Concrete	0.25		0.88	0.40
	1	1.64	2.83	3.43	4.55						U.OO	
						0.00	0.0	4 1 1.		0.83		0.95
	Q	0.40						Asphalt	0.73	0.81	0.86	
			0.71	0.95	1.49	0.69	100	Asphalt				0.47
L	AREA			0.95	1.49	0.69		Asphalt	0.73	0.81	0.86	
+		S-13		0.95	1.49 	0.69		Asphalt	0.73	0.81	0.86 0.40	0.47
-	Event	S-13 0		0.95 25-yr	1.49 	0.69 ACRES		Asphalt	0.73	0.81 0.36	0.86 0.40	0.47
+	Event Acres		0.71				100		0.73 0.31	0.81 0.36 COMPOSITE C CA	0.86 0.40 ALCULATION	0.47 NS
+	Acres	0 1.06	0.71 10-yr 1.06	25-yr 1.06	100-yr 1.06	ACRES	100	Event	0.73 0.31 2-yr	0.81 0.36 COMPOSITE C C/ 10-yr	0.86 0.40 ALCULATION 25-yr	0.47 NS 100-yr
	Acres C	0 1.06 0.31	10-yr 1.06 0.36	25-yr 1.06 0.40	100-yr 1.06 0.47	ACRES 1.06	100 % 100.0	Event Forest/Woodlands 2-7%	0.73 0.31 2-yr 0.31	0.81 0.36 COMPOSITE C CA 10-yr 0.36	0.86 0.40 ALCULATION 25-yr 0.40	0.47 NS 100-yr
	Acres	0 1.06 0.31 40.93	10-yr 1.06 0.36 40.93	25-yr 1.06 0.40 40.93	100-yr 1.06 0.47 40.93	ACRES 1.06 0.00	100 % 100.0 0.0	Event Forest/Woodlands 2-7% Grass/Good 2-7%	0.73 0.31 2-yr 0.31 0.29	0.81 0.36 COMPOSITE C CA 10-yr 0.36 0.35	0.86 0.40 ALCULATION 25-yr 0.40 0.39	0.47 100-yr 0.47 0.46
	Acres C	0 1.06 0.31	10-yr 1.06 0.36	25-yr 1.06 0.40	100-yr 1.06 0.47	1.06 0.00 0.00	100 % 100.0 0.0 0.0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete	0.73 0.31 2-yr 0.31 0.29 0.75	0.81 0.36 COMPOSITE C CA 10-yr 0.36 0.35 0.83	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88	0.47 100-yr 0.47 0.46 0.97
	Acres C Tc I	0 1.06 0.31 40.93 2.22	10-yr 1.06 0.36 40.93 3.38	25-yr 1.06 0.40 40.93 4.08	100-yr 1.06 0.47 40.93 5.40	1.06 0.00 0.00 0.00	100 % 100.0 0.0 0.0 0.0	Event Forest/Woodlands 2-7% Grass/Good 2-7%	0.73 0.31 2-yr 0.31 0.29 0.75 0.73	0.81 0.36 COMPOSITE C CA 10-yr 0.36 0.35 0.83 0.81	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86	0.47 100-yr 0.47 0.46 0.97 0.95
	Acres C	0 1.06 0.31 40.93	10-yr 1.06 0.36 40.93	25-yr 1.06 0.40 40.93	100-yr 1.06 0.47 40.93	1.06 0.00 0.00	100 % 100.0 0.0 0.0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete	0.73 0.31 2-yr 0.31 0.29 0.75	0.81 0.36 COMPOSITE C CA 10-yr 0.36 0.35 0.83	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88	0.47 100-yr 0.47 0.46 0.97
	Acres C Tc I	0 1.06 0.31 40.93 2.22	10-yr 1.06 0.36 40.93 3.38	25-yr 1.06 0.40 40.93 4.08	100-yr 1.06 0.47 40.93 5.40	1.06 0.00 0.00 0.00	100 % 100.0 0.0 0.0 0.0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete	0.73 0.31 2-yr 0.31 0.29 0.75 0.73	0.81 0.36 COMPOSITE C CA 10-yr 0.36 0.35 0.83 0.81	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86	0.47 100-yr 0.47 0.46 0.97 0.95
-	Acres C Tc I	0 1.06 0.31 40.93 2.22	10-yr 1.06 0.36 40.93 3.38	25-yr 1.06 0.40 40.93 4.08	100-yr 1.06 0.47 40.93 5.40	1.06 0.00 0.00 0.00	100 % 100.0 0.0 0.0 0.0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete	0.73 0.31 2-yr 0.31 0.29 0.75 0.73	0.81 0.36 COMPOSITE C CA 10-yr 0.36 0.35 0.83 0.81	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40	0.47 100-yr 0.47 0.46 0.97 0.95 0.47
-	Acres C Tc I	0 1.06 0.31 40.93 2.22 0.73	10-yr 1.06 0.36 40.93 3.38	25-yr 1.06 0.40 40.93 4.08	100-yr 1.06 0.47 40.93 5.40	1.06 0.00 0.00 0.00	100 % 100.0 0.0 0.0 0.0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete	0.73 0.31 2-yr 0.31 0.29 0.75 0.73	0.81 0.36 COMPOSITE C CA 10-yr 0.36 0.35 0.83 0.81 0.36	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40	0.47 100-yr 0.47 0.46 0.97 0.95 0.47
-	Acres C Tc I Q	0 1.06 0.31 40.93 2.22 0.73	10-yr 1.06 0.36 40.93 3.38 1.29	25-yr 1.06 0.40 40.93 4.08 1.74	100-yr 1.06 0.47 40.93 5.40 2.70	1.06 0.00 0.00 0.00 1.06	100.0 0.0 0.0 0.0 100	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt	0.73 0.31 2-yr 0.31 0.29 0.75 0.73 0.31	0.81 0.36 COMPOSITE C CA 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C CA	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION	0.47 100-yr 0.47 0.46 0.97 0.95 0.47
-	Acres C Tc I Q AREA Event Acres	0 1.06 0.31 40.93 2.22 0.73 S-14 0	10-yr 1.06 0.36 40.93 3.38 1.29	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43	1.06 0.00 0.00 0.00 1.06	100 % 100.0 0.0 0.0 0.0 100	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event	0.73 0.31 0.29 0.75 0.73 0.31	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr	0.47 100-yr 0.47 0.46 0.97 0.95 0.47 NS 100-yr
-	Acres C Tc I Q AREA Event Acres C	0 1.06 0.31 40.93 2.22 0.73 S-14 0 0.43 0.31	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47	1.06 0.00 0.00 0.00 1.06 ACRES	100.0 % 100.0 0.0 0.0 100 % 100.0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7%	0.73 0.31 0.29 0.75 0.73 0.31 2-yr 0.31	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40	0.47 100-yr 0.47 0.46 0.97 0.95 0.47 NS 100-yr
-	Acres C Tc I Q AREA Event Acres	0 1.06 0.31 40.93 2.22 0.73 \$-14 0 0.43 0.31 44.89	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36 44.89	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40 44.89	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47 44.89	1.06 0.00 0.00 0.00 1.06 ACRES	100 % 100.0 0.0 0.0 0.0 100 % 100.0 0.0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7%	0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.86 0.40 ALCULATION 25-yr 0.40 0.39	0.47 100-yr 0.47 0.46 0.97 0.95 0.47 NS 100-yr 0.47 0.46
-	Acres C Tc I Q AREA Event Acres C	0 1.06 0.31 40.93 2.22 0.73 S-14 0 0.43 0.31	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47	1.06 0.00 0.00 0.00 1.06 ACRES 0.43 0.00 0.00	100.0 0.0 0.0 0.0 100 % 100.0 0.0 0.0 0.0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete	0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88	0.47 100-yr 0.47 0.46 0.97 0.95 0.47 100-yr 0.47 0.46 0.97
-	Acres C Tc I Q AREA Event Acres C Tc I	0 1.06 0.31 40.93 2.22 0.73 5-14 0 0.43 0.31 44.89 2.09	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36 44.89 3.19	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40 44.89 3.86	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47 44.89 5.11	1.06 0.00 0.00 0.00 1.06 ACRES 0.43 0.00 0.00 0.00	100 % 100.0 0.0 0.0 100 % 100.0 0.0 0.0 0.0 0.0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7%	0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40	0.47 100-yr 0.47 0.46 0.97 0.95 0.47 100-yr 0.47 0.46 0.97 0.95
-	Acres C Tc I Q AREA Event Acres C	0 1.06 0.31 40.93 2.22 0.73 \$-14 0 0.43 0.31 44.89	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36 44.89	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40 44.89	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47 44.89	1.06 0.00 0.00 0.00 1.06 ACRES 0.43 0.00 0.00	100.0 0.0 0.0 0.0 100 % 100.0 0.0 0.0 0.0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete	0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88	0.47 100-yr 0.47 0.46 0.97 0.95 0.47 100-yr 0.47 0.46 0.97
	Acres C Tc I Q AREA Event Acres C Tc I	0 1.06 0.31 40.93 2.22 0.73 5-14 0 0.43 0.31 44.89 2.09	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36 44.89 3.19	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40 44.89 3.86	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47 44.89 5.11	1.06 0.00 0.00 0.00 1.06 ACRES 0.43 0.00 0.00 0.00	100 % 100.0 0.0 0.0 100 % 100.0 0.0 0.0 0.0 0.0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete	0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40	0.47 100-yr 0.47 0.46 0.97 0.95 0.47 100-yr 0.47 0.46 0.97 0.95
	Acres C Tc I Q AREA Event Acres C Tc I	0 1.06 0.31 40.93 2.22 0.73 5-14 0 0.43 0.31 44.89 2.09	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36 44.89 3.19	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40 44.89 3.86	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47 44.89 5.11	1.06 0.00 0.00 0.00 1.06 ACRES 0.43 0.00 0.00 0.00	100 % 100.0 0.0 0.0 100 % 100.0 0.0 0.0 0.0 0.0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete	0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 0.40	0.47 100-yr 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.47 0.46 0.97 0.46 0.97 0.95 0.47
	Acres C Tc I Q AREA Event Acres C Tc I Q	0 1.06 0.31 40.93 2.22 0.73 5-14 0 0.43 0.31 44.89 2.09	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36 44.89 3.19	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40 44.89 3.86	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47 44.89 5.11	1.06 0.00 0.00 0.00 1.06 ACRES 0.43 0.00 0.00 0.00	100 % 100.0 0.0 0.0 100 % 100.0 0.0 0.0 0.0 0.0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete	0.73 0.31 0.29 0.75 0.31 0.29 0.75 0.31 0.29 0.75 0.73 0.31	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 0.35 0.83 0.81 0.36	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 0.40	0.47 100-yr 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.47 0.46 0.97 0.46 0.97 0.95 0.47
	Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event	0 1.06 0.31 40.93 2.22 0.73 S-14 0 0.43 0.31 44.89 2.09 0.28	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36 44.89 3.19 0.50	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40 44.89 3.86 0.67	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47 44.89 5.11 1.04	1.06 0.00 0.00 0.00 1.06 ACRES 0.43 0.00 0.00 0.00 0.00	100 % 100.0 0.0 0.0 100 % 100.0 0.0 0.0 0.0 0.0 100	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt	0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION ALCULATION ALCULATION ALCULATION	0.47 NS 100-yr 0.47 0.46 0.97 0.95 0.47 NS 100-yr 0.46 0.97 0.46 0.97 0.95 0.47 NS
+++++++++++++++++++++++++++++++++++++++	Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event Acres	0 1.06 0.31 40.93 2.22 0.73 5-14 0 0.43 0.31 44.89 2.09 0.28 5-15 0 1.30	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36 44.89 3.19 0.50	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40 44.89 3.86 0.67 25-yr 1.30	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47 44.89 5.11 1.04 100-yr 1.30	1.06 0.00 0.00 1.06 ACRES 0.43 0.00 0.00 0.00 0.00 0.43 ACRES	100 % 100.0 0.0 0.0 100 100 % 100.0 0.0 0.0 0.0 100	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event	0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.31 0.29 0.75 0.73 0.31 0.29	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr	0.47 0.47 0.46 0.97 0.95 0.47 NS 100-yr 0.46 0.97 0.46 0.97 0.46 0.97 0.95 0.47 NS 100-yr
+++++++++++++++++++++++++++++++++++++++	Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event Acres C	0 1.06 0.31 40.93 2.22 0.73 S-14 0 0.43 0.31 44.89 2.09 0.28 S-15 0 1.30 0.31	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36 44.89 3.19 0.50 10-yr 1.30 0.36	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40 44.89 3.86 0.67 25-yr 1.30 0.40	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47 44.89 5.11 1.04 100-yr 1.30 0.47	1.06 0.00 0.00 0.00 1.06 ACRES 0.43 0.00 0.00 0.00 0.43 ACRES 1.30	100.0 % 100.0 0.0 0.0 100 % 100.0 0.0 0.0 0.0 100 % 100.0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Forest/Woodlands 2-7%	0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88	0.47 100-yr 0.47 0.46 0.97 0.95 0.47 100-yr 0.46 0.97 0.46 0.97 0.46 0.97 0.95 0.47
+++++++++++++++++++++++++++++++++++++++	Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event Acres	0 1.06 0.31 40.93 2.22 0.73 S-14 0 0.43 0.31 44.89 2.09 0.28 S-15 0 1.30 0.31 49.37	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36 44.89 3.19 0.50 10-yr 1.30 0.36 49.37	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40 44.89 3.86 0.67 25-yr 1.30 0.40 49.37	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47 44.89 5.11 1.04 100-yr 1.30 0.47 49.37	1.06 0.00 0.00 0.00 1.06 ACRES 0.43 0.00 0.00 0.00 0.00 0.43 ACRES 1.30 0.00	100 % 100.0 0.0 0.0 0.0 100 % 100.0 0.0 0.0 100 % 100.0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Grass/Good 2-7%	0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39	0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.46 0.97 0.95 0.47 0.46
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	Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event Acres C	0 1.06 0.31 40.93 2.22 0.73 S-14 0 0.43 0.31 44.89 2.09 0.28 S-15 0 1.30 0.31 49.37 1.96	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36 44.89 3.19 0.50 10-yr 1.30 0.36 49.37 3.01	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40 44.89 3.86 0.67 25-yr 1.30 0.40 49.37 3.64	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47 44.89 5.11 1.04 100-yr 1.30 0.47 49.37 4.82	1.06 0.00 0.00 0.00 1.06 ACRES 0.43 0.00 0.00 0.00 0.00 0.00 0.00 0.0	1000 % 100.0 0.0 0.0 0.0 1000 % 100.0 0.0 0.0 1000 % 100.0 0.0 0.0 0.0 0.0 0.0 0.0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Grass/Good 2-7%	0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40	0.47 0.46 0.97 0.47 0.46 0.97 0.47 0.46 0.97 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.95
	Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event Acres C	0 1.06 0.31 40.93 2.22 0.73 S-14 0 0.43 0.31 44.89 2.09 0.28 S-15 0 1.30 0.31 49.37	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36 44.89 3.19 0.50 10-yr 1.30 0.36 49.37	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40 44.89 3.86 0.67 25-yr 1.30 0.40 49.37	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47 44.89 5.11 1.04 100-yr 1.30 0.47 49.37	1.06 0.00 0.00 1.06 ACRES 0.43 0.00 0.00 0.00 0.43 ACRES 1.30 0.00 0.00 0.00	100.0 % 100.0 0.0 0.0 100 % 100.0 0.0 0.0 100 % 100.0 0.0 0.0 0.0 0.0 0.0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Concrete Concrete Concrete Concrete Concrete Concrete Concrete	0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.73 0.75 0.73	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40	0.47 100-yr 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.46 0.97 0.95 0.47 0.46 0.97 0.95
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	Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event C Tc I I I I I I I I I I I I I I I I I I	0 1.06 0.31 40.93 2.22 0.73 S-14 0 0.43 0.31 44.89 2.09 0.28 S-15 0 1.30 0.31 49.37 1.96	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36 44.89 3.19 0.50 10-yr 1.30 0.36 49.37 3.01	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40 44.89 3.86 0.67 25-yr 1.30 0.40 49.37 3.64	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47 44.89 5.11 1.04 100-yr 1.30 0.47 49.37 4.82	1.06 0.00 0.00 0.00 1.06 ACRES 0.43 0.00 0.00 0.00 0.00 0.00 0.00 0.0	1000 % 100.0 0.0 0.0 0.0 1000 % 100.0 0.0 0.0 1000 % 100.0 0.0 0.0 0.0 0.0 0.0 0.0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Concrete Concrete Concrete Concrete Concrete Concrete Concrete	0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 0.40 0.39 0.88 0.86 0.40	0.47 0.46 0.97 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.95 0.47
	Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event Acres C Tc I Q AREA	0 1.06 0.31 40.93 2.22 0.73 S-14 0 0.43 0.31 44.89 2.09 0.28 S-15 0 1.30 0.31 49.37 1.96 0.79 S-16	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36 44.89 3.19 0.50 10-yr 1.30 0.36 49.37 3.01 1.40	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40 44.89 3.86 0.67 25-yr 1.30 0.40 49.37 3.64 1.88	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47 44.89 5.11 1.04 100-yr 1.30 0.47 49.37 4.82 2.94	1.06 0.00 0.00 0.00 1.06 ACRES 0.43 0.00 0.00 0.00 0.43 ACRES 1.30 0.00 0.00 0.00 1.30	1000 % 100.0 0.0 0.0 0.0 1000 % 100.0 0.0 0.0 1000 % 100.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt	0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 0.39 0.88 0.86 0.40 ALCULATION 0.39 0.88	0.47 0.46 0.97 0.47 0.46 0.97 0.47 0.46 0.97 0.46 0.97 0.95 0.47 0.46 0.97 0.95 0.47 0.47
	Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event Acres C Tc I Q AREA	0 1.06 0.31 40.93 2.22 0.73 S-14 0 0.43 0.31 44.89 2.09 0.28 S-15 0 1.30 0.31 49.37 1.96 0.79 S-16 0	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36 44.89 3.19 0.50 10-yr 1.30 0.36 49.37 3.01 1.40 10-yr	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40 44.89 3.86 0.67 25-yr 1.30 0.40 49.37 3.64 1.88	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47 44.89 5.11 1.04 100-yr 1.30 0.47 49.37 4.82 2.94	1.06 0.00 0.00 0.00 1.06 ACRES 0.43 0.00 0.00 0.00 0.00 0.00 0.00 0.0	1000 % 100.0 0.0 0.0 0.0 1000 % 100.0 0.0 0.0 1000 % 100.0 0.0 0.0 0.0 0.0 0.0 0.0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Concrete Concrete Concrete Concrete Concrete Concrete Concrete	0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 0.35 0.83 0.81 0.36	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 0.40 0.39 0.88 0.86 0.40	0.47 0.46 0.97 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.95 0.47
	Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event Acres C Tc I Acres	0 1.06 0.31 40.93 2.22 0.73 S-14 0 0.43 0.31 44.89 2.09 0.28 S-15 0 1.30 0.31 49.37 1.96 0.79 S-16 0 0.84	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36 44.89 3.19 0.50 10-yr 1.30 0.36 49.37 3.01 1.40 10-yr 0.84	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40 44.89 3.86 0.67 25-yr 1.30 0.40 49.37 3.64 1.88 25-yr 0.84	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47 44.89 5.11 1.04 100-yr 1.30 0.47 49.37 4.82 2.94 100-yr 0.84	1.06 0.00 0.00 0.00 1.06 ACRES 0.43 0.00 0.00 0.00 0.43 ACRES 1.30 0.00 0.00 0.00 1.30 ACRES	1000 % 100.0 0.0 0.0 0.0 1000 % 100.0 0.0 0.0 1000 % 100.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt	0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 COMPOSITE C C/ 10-yr	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr	0.47 0.46 0.97 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.47 0.46 0.97 0.47 0.46 0.97 0.47
+++++++++++++++++++++++++++++++++++++++	Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event Acres C Tc C Tc C Tc C C Tc C C C C C C C C C	0 1.06 0.31 40.93 2.22 0.73 S-14 0 0.43 0.31 44.89 2.09 0.28 S-15 0 1.30 0.31 49.37 1.96 0.79 S-16 0 0.84 0.31	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36 44.89 3.19 0.50 10-yr 1.30 0.36 49.37 3.01 1.40 10-yr 0.84 0.36	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40 44.89 3.86 0.67 25-yr 1.30 0.40 49.37 3.64 1.88 25-yr 0.84 0.40	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47 44.89 5.11 1.04 100-yr 1.30 0.47 49.37 4.82 2.94 100-yr 0.84 0.47	1.06 0.00 0.00 1.06 ACRES 0.43 0.00 0.00 0.00 0.43 ACRES 1.30 0.00 0.00 0.00 1.30 ACRES	1000 % 100.0 0.0 0.0 0.0 1000 % 100.0 0.0 0.0 0.0 0.0 0.0 1000 % 100.0 % 100.0 % 100.0	Fvent Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Fvent Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Forest/Woodlands 2-7% Concrete Asphalt Forest/Woodlands 2-7% Forest/Woodlands 2-7% Concrete Asphalt	0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 0.35 0.83 0.81 0.36 0.35 0.83 0.81 0.36	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40	0.47 0.46 0.97 0.47 0.46 0.97 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.95 0.47 0.47 0.46 0.97 0.47 0.46 0.97 0.47 0.46 0.97 0.47 0.47 0.46 0.97 0.47 0.47 0.46 0.97 0.47 0.47 0.47 0.47 0.47 0.47 0.47 0.4
	Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event Acres C Tc I Acres	0 1.06 0.31 40.93 2.22 0.73 S-14 0 0.43 0.31 44.89 2.09 0.28 S-15 0 1.30 0.31 49.37 1.96 0.79 S-16 0 0.84 0.31 33.45	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36 44.89 3.19 0.50 10-yr 1.30 0.36 49.37 3.01 1.40 10-yr 0.84 0.36 33.45	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40 44.89 3.86 0.67 25-yr 1.30 0.40 49.37 3.64 1.88 25-yr 0.84 0.40 33.45	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47 44.89 5.11 1.04 100-yr 1.30 0.47 49.37 4.82 2.94 100-yr 0.84 0.47 33.45	1.06 0.00 0.00 0.00 1.06 ACRES 0.43 0.00 0.00 0.00 0.00 0.00 0.43 ACRES 1.30 0.00 0.00 0.00 1.30 ACRES	100 % 100.0 0.0 0.0 0.0 100 % 100.0 0.0 0.0 100 % 100.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt	0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 0.35 0.83	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40	0.47 0.46 0.97 0.47 0.46 0.97 0.47 0.46 0.97 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.47 0.46 0.97 0.47 0.46 0.97 0.47 0.46
	Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event Acres C Tc C Tc C Tc C C Tc C C C C C C C C C	0 1.06 0.31 40.93 2.22 0.73 S-14 0 0.43 0.31 44.89 2.09 0.28 S-15 0 1.30 0.31 49.37 1.96 0.79 S-16 0 0.84 0.31	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36 44.89 3.19 0.50 10-yr 1.30 0.36 49.37 3.01 1.40 10-yr 0.84 0.36	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40 44.89 3.86 0.67 25-yr 1.30 0.40 49.37 3.64 1.88 25-yr 0.84 0.40	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47 44.89 5.11 1.04 100-yr 1.30 0.47 49.37 4.82 2.94 100-yr 0.84 0.47	1.06 0.00 0.00 0.00 1.06 ACRES 0.43 0.00 0.00 0.00 0.43 ACRES 1.30 0.00 0.00 0.00 1.30 ACRES	1000 % 100.0 0.0 0.0 0.0 1000 % 100.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt	0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.75 0.75 0.75 0.75 0.75	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 0.35 0.83 0.81 0.36 0.35 0.83 0.81	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40	0.47 0.46 0.97 0.47 0.46 0.97 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.95
	Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event Acres C Tc C Tc C Tc C C Tc C C C C C C C C C	0 1.06 0.31 40.93 2.22 0.73 S-14 0 0.43 0.31 44.89 2.09 0.28 S-15 0 1.30 0.31 49.37 1.96 0.79 S-16 0 0.84 0.31 33.45	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36 44.89 3.19 0.50 10-yr 1.30 0.36 49.37 3.01 1.40 10-yr 0.84 0.36 33.45	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40 44.89 3.86 0.67 25-yr 1.30 0.40 49.37 3.64 1.88 25-yr 0.84 0.40 33.45	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47 44.89 5.11 1.04 100-yr 1.30 0.47 49.37 4.82 2.94 100-yr 0.84 0.47 33.45	1.06 0.00 0.00 0.00 1.06 ACRES 0.43 0.00 0.00 0.00 0.00 0.00 0.43 ACRES 1.30 0.00 0.00 0.00 1.30 ACRES	100 % 100.0 0.0 0.0 0.0 100 % 100.0 0.0 0.0 100 % 100.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt	0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 0.35 0.83	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40	0.47 0.46 0.97 0.47 0.46 0.97 0.47 0.46 0.97 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.47 0.46 0.97 0.47 0.46 0.97 0.47 0.46
	Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event Acres C Tc I Q AREA Event Acres C Tc C Tc C Tc C C Tc C C C C C C C C C	0 1.06 0.31 40.93 2.22 0.73 S-14 0 0.43 0.31 44.89 2.09 0.28 S-15 0 1.30 0.31 49.37 1.96 0.79 S-16 0 0.84 0.31 33.45	10-yr 1.06 0.36 40.93 3.38 1.29 10-yr 0.43 0.36 44.89 3.19 0.50 10-yr 1.30 0.36 49.37 3.01 1.40 10-yr 0.84 0.36 33.45	25-yr 1.06 0.40 40.93 4.08 1.74 25-yr 0.43 0.40 44.89 3.86 0.67 25-yr 1.30 0.40 49.37 3.64 1.88 25-yr 0.84 0.40 33.45	100-yr 1.06 0.47 40.93 5.40 2.70 100-yr 0.43 0.47 44.89 5.11 1.04 100-yr 1.30 0.47 49.37 4.82 2.94 100-yr 0.84 0.47 33.45	1.06 0.00 0.00 0.00 1.06 ACRES 0.43 0.00 0.00 0.00 0.43 ACRES 1.30 0.00 0.00 0.00 1.30 ACRES	1000 % 100.0 0.0 0.0 0.0 1000 % 100.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt	0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.73 0.31 0.29 0.75 0.75 0.75 0.75 0.75 0.75	0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C C/ 10-yr 0.36 0.35 0.83 0.81 0.36 0.35 0.83 0.81 0.36 0.35 0.83 0.81	0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88 0.86 0.40	0.47 0.46 0.97 0.47 0.46 0.97 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.95 0.47 0.46 0.97 0.95





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NOTES	NAME	DATE
SURVEY BY	QMD	12/2015
DRAWN BY	IMV	12/2015
DESIGNED BY	IMV	12/2015
CHECKED BY	ESD	12/2015
REVIEWED BY	RL	12/2015



Engineering Services
D | V | S | O N

GP-2020-0085.PW

CD-601 <u>57</u> of <u>89</u>

25-yr 1.55 0.40 38.07 4.26 2.65 25-yr 1.09 0.40 31.52 4.76 2.07	1.55 0.47 38.07 5.63 4.10 100-yr 1.09 0.47	1.55 0.00 0.00 0.00 1.55 ACRES 1.09 0.00 0.00	% 100.0 0.0 0.0 0.0 100	Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event	0.31 0.29 0.75 0.73 0.31	0.36 0.35 0.83 0.81 0.36 DMPOSITE C C/	25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr	
0.40 38.07 4.26 2.65 25-yr 1.09 0.40 31.52 4.76	0.47 38.07 5.63 4.10 100-yr 1.09 0.47 31.52 6.26	0.00 0.00 0.00 1.55 ACRES 1.09 0.00 0.00	0.0 0.0 0.0 100	Grass/Good 2-7% Concrete Asphalt	0.29 0.75 0.73 0.31	0.35 0.83 0.81 0.36 DMPOSITE C CA	0.39 0.88 0.86 0.40 ALCULATION	0.46 0.97 0.95 0.47
38.07 4.26 2.65 25-yr 1.09 0.40 31.52 4.76	38.07 5.63 4.10 100-yr 1.09 0.47 31.52 6.26	0.00 0.00 0.00 1.55 ACRES 1.09 0.00 0.00	0.0 0.0 0.0 100	Grass/Good 2-7% Concrete Asphalt	0.29 0.75 0.73 0.31	0.35 0.83 0.81 0.36 DMPOSITE C CA	0.39 0.88 0.86 0.40 ALCULATION	0.46 0.97 0.95 0.47
2.65 25-yr 1.09 0.40 31.52 4.76	5.63 4.10 100-yr 1.09 0.47 31.52 6.26	0.00 0.00 1.55 ACRES 1.09 0.00 0.00	0.0 0.0 100 % 100.0	Concrete Asphalt	0.75 0.73 0.31	0.83 0.81 0.36 DMPOSITE C CA	0.88 0.86 0.40 ALCULATION	0.97 0.95 0.47
2.65 25-yr 1.09 0.40 31.52 4.76	100-yr 1.09 0.47 31.52 6.26	0.00 1.55 ACRES 1.09 0.00 0.00	0.0 100 % 100.0	Asphalt	0.73 0.31	0.81 0.36 DMPOSITE C C	0.86 0.40 ALCULATION	0.95 0.47 NS
25-yr 1.09 0.40 31.52 4.76	100-yr 1.09 0.47 31.52 6.26	1.55 ACRES 1.09 0.00 0.00	% 100.0		0.31 CC	0.36 OMPOSITE C CA	0.40 ALCULATION	0.47 NS
25-yr 1.09 0.40 31.52 4.76	100-yr 1.09 0.47 31.52 6.26	1.09 0.00 0.00	% 100.0	Event	co	OMPOSITE C C	ALCULATION	IS
1.09 0.40 31.52 4.76	1.09 0.47 31.52 6.26	1.09 0.00 0.00	100.0	Event				
1.09 0.40 31.52 4.76	1.09 0.47 31.52 6.26	1.09 0.00 0.00	100.0	Event	2-yr	10-yr	25-vr	100
0.40 31.52 4.76	0.47 31.52 6.26	0.00 0.00					,.	100-yr
31.52 4.76	31.52 6.26	0.00 0.00						
4.76	6.26	0.00		Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
			0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
2.07	3.20	0.00	0.0	Concrete	0.75	0.83	0.88	0.97
2.07	3.20	0.00	0.0	Asphalt	0.73	0.81	0.86	0.95
		1.09	100	Ţ .	0.31	0.36	0.40	0.47
				•				
					co	MPOSITE C C	ALCULATION	IS
25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-yr
1.01	1.01				-		_	
0.40	0.47	1.01	100.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
42.98	42.98	0.00	0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
3.96	5.24	0.00	0.0	Concrete	0.75	0.83	0.88	0.97
		0.00	0.0	Asphalt	0.73	0.81	0.86	0.95
1.61	2.50	1.01	100		0.31	0.36	0.40	0.47
					co	MPOSITE C CA	ALCULATION	1 S
25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-yr
0.48	0.48				•	•	<u> </u>	
0.40	0.47	0.48	100.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
41.75	41.75	0.00	0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
4.03	5.33	0.00	0.0	Concrete	0.75	0.83	0.88	0.97
		0.00	0.0	Asphalt	0.73	0.81	0.86	0.95
0.78	1.21	0.48	100		0.31	0.36	0.40	0.47
					co	MPOSITE C CA	ALCULATION	1 S
25-yr	100-yr	ACRES	%	Event		10-yr	25-yr	100-yr
		_		-	•	•	•	
0.53	0.47	0.53	100.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
0.53 0.40		0.00	0.0	•				0.46
		0.00	0.0		0.75		0.88	0.97
0.40 42.42		0.00	0.0					0.95
0.40								0.47
	0.53 0.40 42.42	0.53 0.53 0.40 0.47 42.42 42.42	0.53 0.53 0.40 0.47 0.53 42.42 42.42 0.00 3.99 5.28 0.00 0.00 0.00	0.53 0.53 0.40 0.47 0.53 100.0 42.42 42.42 0.00 0.0 3.99 5.28 0.00 0.0 0.00 0.0 0.0	0.53 0.53 0.40 0.47 0.53 100.0 Forest/Woodlands 2-7% 42.42 42.42 0.00 0.0 Grass/Good 2-7% 3.99 5.28 0.00 0.0 Concrete 0.00 0.0 Asphalt	25-yr 100-yr ACRES % Event 2-yr 0.53 0.53 0.40 0.47 0.53 100.0 Forest/Woodlands 2-7% 0.31 42.42 42.42 0.00 0.0 Grass/Good 2-7% 0.29 3.99 5.28 0.00 0.0 Concrete 0.75 0.00 0.00 Asphalt 0.73	25-yr 100-yr ACRES % Event 2-yr 10-yr 0.53 0.53 0.40 0.47 0.53 100.0 Forest/Woodlands 2-7% 0.31 0.36 42.42 42.42 0.00 0.0 Grass/Good 2-7% 0.29 0.35 3.99 5.28 0.00 0.0 Concrete 0.75 0.83 0.00 0.00 Asphalt 0.73 0.81	25-yr 100-yr ACRES % Event 2-yr 10-yr 25-yr 0.53 0.53 0.40 0.47 0.53 100.0 Forest/Woodlands 2-7% 0.31 0.36 0.40 42.42 42.42 0.00 0.0 Grass/Good 2-7% 0.29 0.35 0.39 3.99 5.28 0.00 0.0 Concrete 0.75 0.83 0.88 0.00 0.00 Asphalt 0.73 0.81 0.86

TIME OF CONCENTRATION - TR-55 CALCULATIONS

Project Name: Violet Crown Trail

Date Updated: 11/15/2016

*See Equations tab for Tc equations

Draina	inage Area Tc Sheet Flow Shallow Concentrated Flow				Channel											
Basin	Area (ac)	Tc (min)	Tlag (min)	L (ft)	n	Δ Elev. (ft)	s (ft/ft)	Tt Sheet (min)	L (ft)	Δ Elev. (ft)	s (ft/ft)	Pa ved?	Tt Shallow1 (min)	L (ft)	v (fps)	T _t Channel (min)
S-1	0.07	30.8	18.5	100	0.8	3	0.030	30.7	30	1	0.033	N	0.2			
S-2	0.78	34.4	20.7	100	0.8	2.5	0.025	33.0	190	3.5	0.018	N	1.4			
S-3	0.70	35.4	21.2	100	0.8	2.25	0.023	34.4	160	4.75	0.030	N	1.0	150	4	0.63
S-4	0.67	30.7	18.4	100	0.8	3	0.030	30.7						350	4	1.46
S-17	1.18	25.6	15.4	40	0.8	0.3	0.008	25.6						540	4	2.25
S-5	0.31	36.4	21.8	80	0.8	1	0.013	36.4								
S-6	0.32	36.1	21.6	100	0.8	2.0	0.020	36.1								
S-7	0.40	40.5	24.3	100	0.8	1.5	0.015	40.5								
S-8	0.45	40.5	24.3	100	0.8	1.5	0.015	40.5								
S-9	1.84	65.3	39.2	100	0.8	0.5	0.005	62.8	160	2	0.013	N	1.5	260	4	1.08
S-10	0.27	54.2	32.5	100	0.8	0.8	0.008	53.4	110	2	0.018	N	0.8			
S-11	0.25	40.9	24.6	100	0.8	1.5	0.015	40.5	80	2.5	0.031	N	0.5			
S-12	0.69	44.9	26.9	100	0.8	1.3	0.013	43.5	260	10	0.038	N	1.4			
S-13	1.06	49.4	29.6	100	0.8	1.0	0.010	47.6	330	12	0.036	N	1.8			
S-14	0.43	33.4	20.1	100	0.8	2.5	0.025	33.0	110	6.5	0.059	N	0.5			
S-15	1.30	38.1	22.8	100	0.8	2.0	0.020	36.1	330	9.5	0.029	N	2.0			
S-16	0.84	31.5	18.9	100	0.8	3.0	0.030	30.7	140	4	0.029	N	0.9			
N-1	1.55	43.0	25.8	100	0.8	1.5	0.015	40.5	210	3	0.014	N	1.8	170	4	0.71
N-2	1.09	41.7	25.0	100	0.8	1.5	0.015	40.5	140	3.5	0.025	N	0.9	90	4	0.38
N-3	1.01	42.4	25.5	100	0.8	1.5	0.015	40.5	220	4.5	0.020	N	1.6	90	4	0.38
N-4	0.48	36.7	22.0	100	0.8	2.0	0.020	36.1	90	2	0.022	N	0.6			
N-5	0.53	48.8	29.3	100	0.8	1.0	0.010	47.6	160	3	0.019	N	1.2			
N-6	0.36	48.1	28.8	100	0.8	1.0	0.010	47.6	70	1.5	0.021	N	0.5			
N-7 & 8	1.12	64.9	38.9	100	0.8	0.5	0.005	62.8	200	2.5	0.013	N	1.8	60	4	0.25
N-9	0.98	46.6	28.0	100	0.8	1.3	0.013	43.5	300	3	0.010	N	3.1			
N-10	0.62	44.7	26.8	100	0.8	1.3	0.013	43.5	140	2.25	0.016	N	1.1			
N-11	0.28	37.0	22.2	100	0.8	2.0	0.020	36.1	100	1.25	0.013	N	0.9			
N-12	0.23	40.9	24.6	100	0.8	1.5	0.015	40.5	60	1	0.017	N	0.5			
N-13	0.43	36.2	21.7	100	0.8	2.0	0.020	36.1	20	0.25	0.013	N	0.2			
N-14	0.28	34.8	20.9	70	0.8	0.8	0.011	34.8								
N-15	0.23	38.2	22.9	100	0.8	1.8	0.018	38.0	20	0.25	0.013	N	0.2			
N-16	0.29	38.2	22.9	100	0.8	1.8	0.018	38.0	20	0.25	0.013	N	0.2			

		_	_								
AREA	N-6							1	COMPOSITE C CA	LCULATION	NS
vent	0	10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-yr
Acres	0.36	0.36	0.36	0.36							
С	0.31	0.36	0.40	0.47	0.36	100.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
Tc	36.68	36.68	36.68	36.68	0.00	0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
1	2.38	3.61	4.36	5.75	0.00	0.0	Concrete	0.75	0.83	0.88	0.97
1	2.38	3.61	4.30	5.75							
_					0.00	0.0	Asphalt	0.73	0.81	0.86	0.95
Q	0.26	0.46	0.62	0.96	0.36	100		0.31	0.36	0.40	0.47
AREA	N-7 & 8							ı	COMPOSITE C CA	LCULATION	NS
vent	0	10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-yr
Acres	1.13	1.13	1.13	1.13					•	·	
С	0.31	0.36	0.40	0.47	1.13	100.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
							•				
Tc	48.79	48.79	48.79	48.79	0.00	0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
ı	1.98	3.03	3.66	4.86	0.00	0.0	Concrete	0.75	0.83	0.88	0.97
					0.00	0.0	Asphalt	0.73	0.81	0.86	0.95
Q	0.69	1.23	1.65	2.57	1.13	100		0.31	0.36	0.40	0.47
REA	N-9							1	COMPOSITE C CA	LCULATION	us.
vent	0	10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-yr
cres	0.98	0.98	0.98	0.98	7101120	,,		<u> </u>			
					0.00	100.0	Former (M) and bringle 2. 70/	0.31	0.36	0.40	0.47
С -	0.31	0.36	0.40	0.47	0.98	100.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
Tc	48.08	48.08	48.08	48.08	0.00	0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
1	2.00	3.06	3.70	4.90	0.00	0.0	Concrete	0.75	0.83	0.88	0.97
					0.00	0.0	Asphalt	0.73	0.81	0.86	0.95
Q	0.61	1.08	1.45	2.26	0.98	100		0.31	0.36	0.40	0.47
		_	-		-			· 			
REA	N-10							•	COMPOSITE C CA	LCUIATIO	NS
ent	0	10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-yr
			-		ACKES	70	Evelif	∠-yr	10-ÀL	23-yr	TOO-AL
cres	0.98	0.98	0.98	0.98		- -	man and the second second	<u>.</u> -	<u>.</u> -	<u>.</u> .	
С	0.41	0.47	0.51	0.59	0.75	76.5	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
Tc	64.88	64.88	64.88	64.88	0.00	0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
1	1.63	2.51	3.05	4.06	0.23	23.5	Concrete	0.75	0.83	0.88	0.97
					0.00	0.0	Asphalt	0.73	0.81	0.86	0.95
Q	0.66	1.16	1.54	2.35	0.98	100	,	0.73	0.47	0.51	0.59
-	5.00				0.50			3. ⊤ ±	U. T.	J.J.L	
REA	N-11							ı	COMPOSITE C CA	LCULATION	NS
/ent	0	10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-yr
cres	0.29	0.29	0.29	0.29	7101120	, ,					
					0.35	05.7	Face at /14/a and larged a 2, 70/	0.34	0.36	0.40	0.47
C	0.37	0.43	0.47	0.54	0.25	85.7	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
Tc	46.62	46.62	46.62	46.62	0.00	0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
1	2.04	3.12	3.77	4.99	0.04	14.3	Concrete	0.75	0.83	0.88	0.97
					0.00	0.0	Asphalt	0.73	0.81	0.86	0.95
Q	0.22	0.38	0.51	0.78	0.29	100		0.37	0.43	0.47	0.54
REA	N-12							l	COMPOSITE C CA	LCULATION	
vent	0	10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-yr
cres	0.23	0.23	0.23	0.23							
С	0.31	0.36	0.40	0.47	0.23	100.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
		44.66	44.66	44.66			•				
Tc	44.66				0.00	0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
I	2.10	3.20	3.87	5.13	0.00	0.0	Concrete	0.75	0.83	0.88	0.97
					0.00	0.0	Asphalt	0.73	0.81	0.86	0.95
Q	0.15	0.27	0.36	0.56	0.23	100		0.31	0.36	0.40	0.47
REA	N-13								COMPOSITE C CA		
/ent	0	10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-yr
cres	0.43	0.43	0.43	0.43							
С	0.31	0.36	0.40	0.47	0.43	100.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
Tc	36.98	36.98	36.98	36.98	0.00	0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
1	2.36	3.60	4.34	5.72	0.00	0.0	Concrete	0.25	0.83	0.33	0.40
1	2.30	3.00	4.54	3.72							
_		<u></u>			0.00	0.0	Asphalt	0.73	0.81	0.86	0.95
Q	0.31	0.55	0.74	1.15	0.43	100		0.31	0.36	0.40	0.47
REA	N-14								COMPOSITE C CA	LCUI ATION	NS
ent	0	10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-yr
cres	0.28	0.28	0.28	0.28	ACITES	70	LVCIIL	~~yı	TO- A1	y۱ -د-	100- yı
						466 -	Page 14 Aug 10 1 A Table	0.01	0.00	0.40	o
C -	0.31	0.36	0.40	0.47	0.28	100.0	Forest/Woodlands 2-7%	0.31	0.36	0.40	0.47
Tc	40.94	40.94	40.94	40.94	0.00	0.0	Grass/Good 2-7%	0.29	0.35	0.39	0.46
1	2.22	3.38	4.08	5.40	0.00	0.0	Concrete	0.75	0.83	0.88	0.97
•					0.00	0.0	Asphalt	0.73	0.81	0.86	0.95
•		0.34	0.46	0.71	0.28	100		0.31	0.36	0.40	0.47
Q Q	0.19										
՝ զ	0.19								00h45-00-	16	16
Q									COMPOSITE C CA	LCULATION	
REA	N-15										
REA /ent	N-15 0	10-yr	25-yr	100-yr	ACRES	%	Event	2-yr	10-yr	25-yr	100-yr
REA /ent	N-15	10-yr 0.23	25-yr 0.23	100-yr 0.23	ACRES	%	Event	2-yr			100-yr
REA rent	N-15 0		-		ACRES 0.23	% 100.0	Event Forest/Woodlands 2-7%	2-yr 0.31			0.47
REA vent cres	N-15 0 0.23 0.31	0.23	0.23	0.23 0.47			Forest/Woodlands 2-7%	0.31	10-yr 0.36	25-yr	0.47
REA vent cres	N-15 0 0.23 0.31 36.25	0.23 0.36 36.25	0.23 0.40 36.25	0.23 0.47 36.25	0.23 0.00	100.0 0.0	Forest/Woodlands 2-7% Grass/Good 2-7%	0.31 0.29	0.36 0.35	25-yr 0.40 0.39	0.47 0.46
REA vent cres	N-15 0 0.23 0.31	0.23 0.36	0.23 0.40	0.23 0.47	0.23 0.00 0.00	100.0 0.0 0.0	Forest/Woodlands 2-7% Grass/Good 2-7% Concrete	0.31 0.29 0.75	0.36 0.35 0.83	0.40 0.39 0.88	0.47 0.46 0.97
REA vent cres C Tc	N-15 0 0.23 0.31 36.25 2.39	0.23 0.36 36.25 3.64	0.23 0.40 36.25 4.39	0.23 0.47 36.25 5.79	0.23 0.00 0.00 0.00	100.0 0.0 0.0 0.0	Forest/Woodlands 2-7% Grass/Good 2-7%	0.31 0.29 0.75 0.73	0.36 0.35 0.83 0.81	0.40 0.39 0.88 0.86	0.47 0.46 0.97 0.95
REA vent cres C Tc	N-15 0 0.23 0.31 36.25	0.23 0.36 36.25	0.23 0.40 36.25	0.23 0.47 36.25	0.23 0.00 0.00	100.0 0.0 0.0	Forest/Woodlands 2-7% Grass/Good 2-7% Concrete	0.31 0.29 0.75	0.36 0.35 0.83	0.40 0.39 0.88	0.47 0.46 0.97
REA vent cres C Tc I	N-15 0 0.23 0.31 36.25 2.39	0.23 0.36 36.25 3.64	0.23 0.40 36.25 4.39	0.23 0.47 36.25 5.79	0.23 0.00 0.00 0.00	100.0 0.0 0.0 0.0	Forest/Woodlands 2-7% Grass/Good 2-7% Concrete	0.31 0.29 0.75 0.73 0.31	0.36 0.35 0.83 0.81	0.40 0.39 0.88 0.86 0.40	0.47 0.46 0.97 0.95 0.47
REA rent cres C Tc I	N-15 0 0.23 0.31 36.25 2.39 0.17	0.23 0.36 36.25 3.64	0.23 0.40 36.25 4.39	0.23 0.47 36.25 5.79	0.23 0.00 0.00 0.00	100.0 0.0 0.0 0.0	Forest/Woodlands 2-7% Grass/Good 2-7% Concrete	0.31 0.29 0.75 0.73 0.31	0.36 0.35 0.83 0.81 0.36	0.40 0.39 0.88 0.86 0.40	0.47 0.46 0.97 0.95 0.47
REA /ent cres C Tc I Q REA	N-15 0 0.23 0.31 36.25 2.39 0.17 N-16 0	0.23 0.36 36.25 3.64 0.30	0.23 0.40 36.25 4.39 0.41	0.23 0.47 36.25 5.79 0.63	0.23 0.00 0.00 0.00 0.23	100.0 0.0 0.0 0.0 100	Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt	0.31 0.29 0.75 0.73 0.31	0.36 0.35 0.83 0.81 0.36	25-yr 0.40 0.39 0.88 0.86 0.40	0.47 0.46 0.97 0.95 0.47
REA vent cres C Tc I Q REA vent cres	N-15 0 0.23 0.31 36.25 2.39 0.17 N-16 0 0.29	0.23 0.36 36.25 3.64 0.30	0.23 0.40 36.25 4.39 0.41 25-yr 0.29	0.23 0.47 36.25 5.79 0.63 100-yr 0.29	0.23 0.00 0.00 0.00 0.23	100.0 0.0 0.0 0.0 100	Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event	0.31 0.29 0.75 0.73 0.31	10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C CA 10-yr	25-yr 0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr	0.47 0.46 0.97 0.95 0.47
REA vent cres C Tc I Q REA vent cres C	N-15 0 0.23 0.31 36.25 2.39 0.17 N-16 0 0.29 0.31	0.23 0.36 36.25 3.64 0.30 10-yr 0.29 0.36	0.23 0.40 36.25 4.39 0.41 25-yr 0.29 0.40	0.23 0.47 36.25 5.79 0.63 100-yr 0.29 0.47	0.23 0.00 0.00 0.00 0.23 ACRES	100.0 0.0 0.0 0.0 100	Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7%	0.31 0.29 0.75 0.73 0.31 2-yr	10-yr 0.36 0.35 0.83 0.81 0.36 COMPOSITE C CA 10-yr 0.36	0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr	0.47 0.46 0.97 0.95 0.47 NS 100-yr
REA /ent Cres C T C I Q REA /ent cres C	N-15 0 0.23 0.31 36.25 2.39 0.17 N-16 0 0.29 0.31 34.80	0.23 0.36 36.25 3.64 0.30 10-yr 0.29 0.36 34.80	0.23 0.40 36.25 4.39 0.41 25-yr 0.29 0.40 34.80	0.23 0.47 36.25 5.79 0.63 100-yr 0.29 0.47 34.80	0.23 0.00 0.00 0.00 0.23 ACRES 0.29 0.00	100.0 0.0 0.0 0.0 100	Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7%	0.31 0.29 0.75 0.73 0.31 2-yr	0.36 0.35 0.83 0.81 0.36 COMPOSITE C CA 10-yr 0.36 0.35	0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39	0.46 0.97 0.95 0.47 NS 100-yr 0.47 0.46
REA /ent cres C Tc I Q REA /ent cres C	N-15 0 0.23 0.31 36.25 2.39 0.17 N-16 0 0.29 0.31	0.23 0.36 36.25 3.64 0.30 10-yr 0.29 0.36	0.23 0.40 36.25 4.39 0.41 25-yr 0.29 0.40	0.23 0.47 36.25 5.79 0.63 100-yr 0.29 0.47	0.23 0.00 0.00 0.00 0.23 ACRES 0.29 0.00 0.00	100.0 0.0 0.0 0.0 100 % 100.0 0.0 0.0	Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7% Concrete	0.31 0.29 0.75 0.73 0.31 0.29 0.75	0.36 0.35 0.83 0.81 0.36 COMPOSITE C CA 10-yr 0.36 0.35 0.83	0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39 0.88	0.47 0.46 0.97 0.95 0.47 100-yr 0.47 0.46 0.97
REA vent cres C Tc I Q REA vent cres	N-15 0 0.23 0.31 36.25 2.39 0.17 N-16 0 0.29 0.31 34.80	0.23 0.36 36.25 3.64 0.30 10-yr 0.29 0.36 34.80	0.23 0.40 36.25 4.39 0.41 25-yr 0.29 0.40 34.80	0.23 0.47 36.25 5.79 0.63 100-yr 0.29 0.47 34.80	0.23 0.00 0.00 0.00 0.23 ACRES 0.29 0.00	100.0 0.0 0.0 0.0 100	Forest/Woodlands 2-7% Grass/Good 2-7% Concrete Asphalt Event Forest/Woodlands 2-7% Grass/Good 2-7%	0.31 0.29 0.75 0.73 0.31 2-yr	0.36 0.35 0.83 0.81 0.36 COMPOSITE C CA 10-yr 0.36 0.35	0.40 0.39 0.88 0.86 0.40 ALCULATION 25-yr 0.40 0.39	0.47 0.46 0.97 0.95 0.47 NS 100-yr

NOUNDESCRIPTION OF TEACH OF TE

DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
LET CROWN TRAIL - NORTH
PHASE 2A

DRAINAGE AREA CALCULATION - NORTH 1
OVERALL TIME OF CONCENTRATION

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NOTES	NAME	DATE	OF AUST			
SURVEY BY	QMD	12/2015	C:\USERS\YAMAGUCHIR\CITY			
DRAWN BY	IMV	12/2015	3UCH			
ESIGNED BY	IMV	12/2015	AMAC			
HECKED BY	ESD	12/2015	FRS/\			
EVIEWED BY	RL	12/2015	SUND			



Engineering Services
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BARRICADING SUMMARY TABLE

STREETS

					- · · · - · · · - · · · · · · · · · · ·				
STREET	CLASSIFICATION	PROTECTION	STREET FROM	STREET TO	PLANNED IMPROVEMENTS	TRAFFIC CONTROL PLAN SHEET / DETAIL	ALLOWED BARRICADING HOURS	DURATION	COMMENTS
S. MOPAC EXPY SERVICE ROAD SOUTH BOUND	ARTERIAL	N/A	MONTEREY OAKS BLVD	W. WILLIAM CANNON DRIVE	TRAIL CONSTRUCTION	SEE SHEET CT-101, CT-001	24 HOURS	9 MONTHS	
HOME DEPOT BOULEVARD	COLLECTOR	N/A	BRODIE LANE	HOME DEPOT BLVD CUL-DE-SAC	TRAIL CONSTRUCTION	SEE SHEET CT-102, CT-001	24 HOURS	9 MONTHS	
BEN GARZA LANE	COLLECTOR	N/A	BRODIE LANE	SO MOPAC EXPY SERVICE ROAD NORTH BOUND	TRAIL CONSTRUCTION	SEE SHEET CT-101, CT-001	24 HOURS	9 MONTHS	

INTERSECTIONS

STREET INTERSECTION	PLANNED IMPROVEMENTS	TRAFFIC CONTROL PLAN SHEET / DETAIL	ALLOWED BARRICADING HOURS	DURATION	COMMENTS

RIGHT OF WAY MANAGEMENT STANDARD NOTES

- CONTRACTOR SHALL HAVE AN APPROVED RIGHT OF WAY (ROW) PERMIT AND TRAFFIC CONTROL PLAN (TCP) IN ELECTRONIC OR PAPER FORMATS ON SITE AT ALL TIMES WHEN WORKING IN THE ROW.
- 2. CONTRACTOR SHALL PROVIDE NOTIFICATION, AS PER THE LATEST MOBILITY GUIDELINES (MG-04).
- 3. UNLESS OTHERWISE APPROVED BY THE ROW DIVISION OF AUSTIN TRANSPORTATION DEPARTMENT (ATD): A.) ONLY ONE PHASE OF A TCP MAY BE SET AT ANY ONE TIME, AND B.) INITIAL SETUP AND PHASE CHANGES OF LONG-TERM WORK ZONES SHALL BE INSTALLED ON WEEKENDS.
- ONCE TRAFFIC CONTROL HAS BEEN SET, THE AUTHORIZED AND COMPETENT REPRESENTATIVE FROM THE PROJECT TEAM/BARRICADE COMPANY WILL COMPLETE AND UPLOAD THE "CONTRACTOR'S SELF-INSPECTION CHECKLIST" FORM. SEE FORM AND
- DETAILED INSTRUCTIONS HERE HTTPS://WWW.AUSTINTEXAS.GOV/PAGE/RIGHT-WAY-TRAFFIC-CONTROL
- FOR ROW VIOLATIONS, AN INVESTIGATION FEE WILL BE ASSESSED FOR EACH OFFENSE UNTIL THE VIOLATION IS CORRECTED. SEE CURRENT FEE SCHEDULE HERE: HTTPS://WWW.AUSTINTEXAS.GOV/SITES/DEFAULT/FILES/FILES/TRANSPORTATION/ RIGHT_OF_WAY/APPROVED_ROW_FEES.PDF
- EXCAVATIONS SHALL BE BACKFILLED OR PLATED WHEN REQUIRED TO OPEN TO TRAFFIC. TEMPORARY PAVING SHALL BE DONE ACCORDING TO CITY OF AUSTIN (COA) STANDARD DETAIL 1100S-4 (FOR HMAC OR PCC PAVEMENTS). FOR EXCAVATIONS EXCEEDING A TRANSVERSE WIDTH OF 5 FEET, THE CONTRACTOR SHALL PROVIDE AN ENGINEERED PLATING PLAN FOR REVIEW BY THE CITY.
- 7. PEDESTRIAN ROUTES IN AND AROUND THE WORK ZONE, INCLUDING CONSTRUCTION ENTRANCES, TEMPORARY WALKING PATHS, BYPASSES, COVERED WALKWAYS, AND DETOURS. MUST REMAIN ACCESSIBLE AND ADA COMPLIANT THROUGHOUT THE
- 8. ALL APPLICABLE SAFEGUARDS SHALL BE IN PLACE PER CHAPTER 33 OF THE INTERNATIONAL BUILDING CODE, TO INCLUDE PEDESTRIAN PROTECTIONS PER SECTION
- "CONSTRUCTION ENTRANCE AHEAD" SIGNS MUST BE PLACED AT ALL APPROACHES TO CONSTRUCTION ENTRANCES, UNLESS OTHERWISE SHOWN ON THE APPROVED TCP.
- 10. EXISTING DRIVEWAYS SHALL NOT BE CLOSED EXCEPT WITH ADVANCE NOTICE TO THE AFFECTED BUSINESSES/RESIDENCES AND APPROVAL FROM THE ROW DIVISION OF ATD.

EXCEPTIONS TABLE

NOTE#

11. ALL TRAFFIC CONTROL DEVICES INCLUDING PROTECTIVE BARRIERS MUST BE CRASHWORTHY AND INSTALLED ACCORDING TO THE MANUFACTURER'S GUIDELINES. CRASHWORTHINESS SHALL BE DETERMINED PER MASH TESTING REQUIREMENTS.

- 12. OVERNIGHT PROTECTION OF WORK ZONES AND STORAGE OF MATERIAL/EQUIPMENT SHALL BE ACCORDING TO COA STANDARD DETAIL 804S-4.
- 13. THE NAME OF THE BARRICADE CONTRACTOR SHALL BE SHOWN ON THE NON-REFLECTIVE SURFACE OF ALL TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH COA STANDARD DETAIL 804S-5.
- 14. THE CITY'S TRAFFIC ENGINEER OR INSPECTOR MAY MAKE OR REQUIRE FIELD ADJUSTMENTS TO ADDRESS ISSUES OF SAFETY AND MOBILITY.
- 15. IF EXISTING CAPITAL METRO BUS STOPS ARE WITHIN THE TEMPORARY TRAFFIC CONTROL OR DETOUR AREA, THE CONTRACTOR SHALL CONTACT CAPITAL METRO (LAURIE MICHEL AT 512-621-5713 (MOBILE)/ 512-369-7701 (WORK), LAURIE.MICHEL@CAPMETRO.ORG), OR SERVICE.IMPACTS@CAPMETRO.ORG, TWO (2) WEEKS PRIOR TO SETTING UP THE TRAFFIC CONTROL DEVICES IN ORDER TO COORDINATE POTENTIAL BUS-STOP RELOCATION OR ANY OTHER RELATED ISSUES.
- 16. IF EXISTING SIGNALIZED INTERSECTIONS ARE WITHIN THE TEMPORARY TRAFFIC CONTROL AREA, THE CONTRACTOR SHALL CONTACT ATD – SIGNALS DIVISION AT (512) 974-4075, ONE WEEK PRIOR TO SETTING TRAFFIC CONTROL DEVICES.
- 17. THE RIGHT OF WAY SHALL BE RETURNED TO FULL USE AT THE END OF THE APPROVED
- 18. CONTRACTORS SHALL ADHERE TO ALL ROW SPECIAL EVENT ACTIVITY RESTRICTIONS, AS PER THE LATEST MOBILITY GUIDELINES (MG-08).
- 19. PROJECTS THAT ARE ROUTED THROUGH THE DAPCZ PROCESS ARE REQUIRED TO COORDINATE WITH THE OFFICE OF SPECIAL EVENTS (512-9741000 OR TRANSPORTATIONSPECIALEVENTS@AUSTINTEXAS.GOV), IN CONJUNCTION WITH THE ROW DIVISION OF ATD. VISIT CITY STAGE FOR SCHEDULED EVENTS FOR ALL OF AUSTIN.
- 20. PURSUANT TO CITY CODE 9-2-3, ROW WORK MUST NOT MAKE NOISE AUDIBLE TO AN ADJACENT BUSINESS OR RESIDENCE BETWEEN 10:30PM AND 7:00AM OR OPERATE A MACHINE THAT SEPARATES, GATHERS, GRADES, LOADS, OR UNLOADS SAND, ROCK, OR GRAVEL WITHIN 600 FEET OF A RESIDENCE, CHURCH, HOSPITAL, HOTEL, OR MOTEL BETWEEN 7:00PM AND 6:00AM, EXCEPT FOR INSTALLATION OF CONCRETE AUTHORIZED BY A SEPARATE NON-PEAK HOUR CONCRETE POUR PERMIT ISSUED UNDER CITY CODE SECTION 9-2-21.

EXPLANATION OF EXCEPTION

STREET PROTECTION & CLASSIFICATION:

STREET PROTECTION AND CLASSIFICATION ARE BASED ON PUBLIC WORKS PROTECTION STREETS LIST DATED JANUARY 2, 2020.

NOTES FOR CONTRACTOR:

- 1. CONTRACTOR TO MAINTAIN ACCESS TO ALL RESIDENT'S DRIVEWAYS DURING CONSTRUCTION.
- 2. ONE WEEK PRIOR TO CONSTRUCTION, PUBLIC OUTREACH IS REQUIRED AND CONTRACTOR TO CALL THE 311 SYSTEM.
- 3. EXISTING SIDEWALKS SHALL REMAIN ACCESSIBLE AT ALL TIMES. IF NEEDED, A CONSTRUCTION FENCE SHALL BE PLACED FOR PEDESTRIAN SAFETY.
- 4. CONTRACTOR MAY USE COA STANDARD DETAIL 804S-1, SHEET 9 OF 9 FOR SIGN SPACING.

MESSAGE BOARD TO READ AS FOLLOWS:

"UTILITY _" "STARTING" "FOLLOW _ _" "DETOUR _ _"

(# - THE MONTH AND DAY IN TWO DIGIT NUMBERS)

(MESSAGE BOARD ADVISES OF CONSTRUCTION PLACED A WEEK PRIOR TO CONSTRUCTION, INSTALL NOT TO BLOCK SIDEWALK)

SPECIAL PEDESTRIAN ACCOMMODATION NOTES:

- PEDESTRIAN TRAFFIC MUST BE MAINTAINED. SIDEWALK CLOSURES USING COA STANDARD 804S-1, 4 OF 9 ARE ACCEPTABLE ONLY IN SITUATIONS WHERE PEDESTRIANS CAN BE DETOURED AROUND THE CLOSURE WITHIN ONE BLOCK, AND/OR WITHIN A DISTANCE OF 1,000 FEET. PEDESTRIAN STREET CROSSINGS CAN BE MADE AT DESIGNATED CROSSWALKS
- 2. IF A PEDESTRIAN DETOUR IS NOT FEASIBLE, THE CONTRACTOR SHALL PROVIDE COMPETENT/TRAINED PERSONNEL TO ASSIST PEDESTRIANS AROUND THE ACTIVE WORK

CAPITAL METRO BUS STOP COORDINATION:

1. FOR ANY CONSTRUCTION THAT WILL POTENTIALLY IMPACT BUS ROUTES OR BUS STOPS FOR THE CAPITAL METRO SERVICE AREA, CONTACT MARK A. HERRERA (512) 369-6548 OR MARK.HERRERA@CAPMETRO.ORG AT LEAST 48 HOURS PRIOR TO TRAFFIC CONTROL SET

ALLEY CLOSURE COORDINATION:

1. ALLEY CLOSURES REQUIRE AUSTIN RESOURCE RECOVERY (ARR) COORDINATION WITH LORI SCOTT (512) 974-1028 OR LORI.SCOTT@AUSTINTEXAS.GOV AND AREA BUSINESSES, ONE WEEK IN ADVANCE.

NO PARKING SIGNS:

- 1. ALL NO PARKING SIGNS MUST BE PLACED AT 45 DEGREE ANGLE TO TRAFFIC, AT 50' MINIMUM / 75' MAXIMUM SPACING, NO MORE THAN 48 HOURS IN ADVANCE. CONTACT DAVID SMITH WITH COA METER SHOP AT (512) 974-1553 TO HOOD METERS.
- 2. THE SIGN CONFIGURATION LISTED BELOW SHALL APPLY AS IT IS REQUIRED EVERYWHERE WHERE "NO PARKING" IS NEEDED:

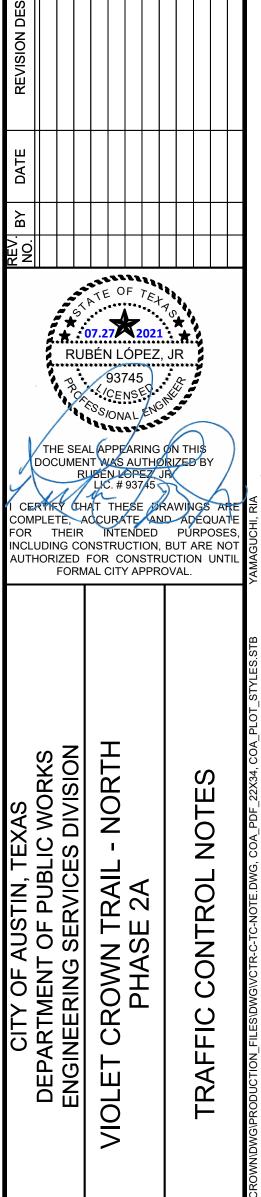


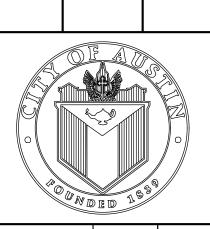












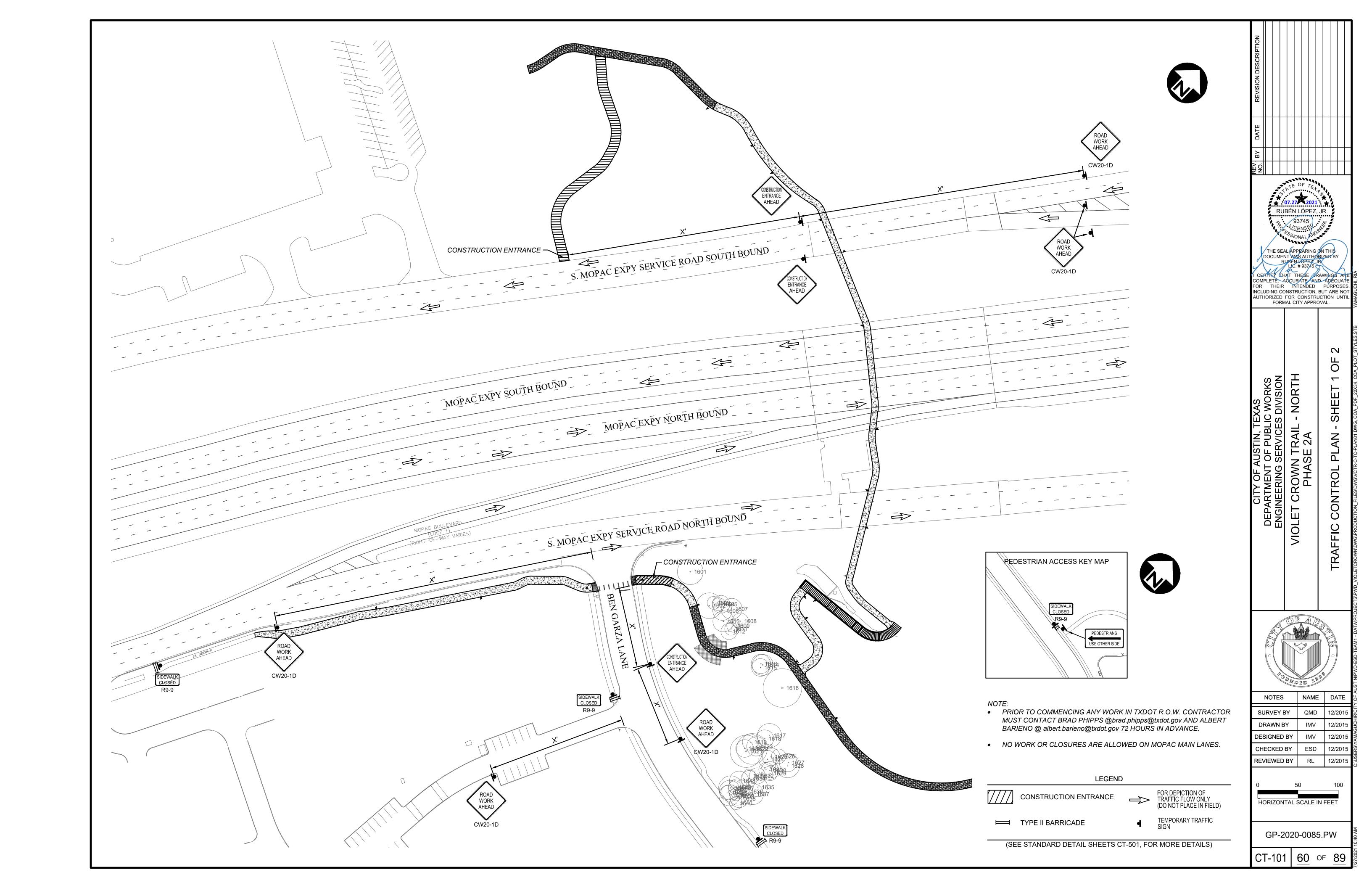
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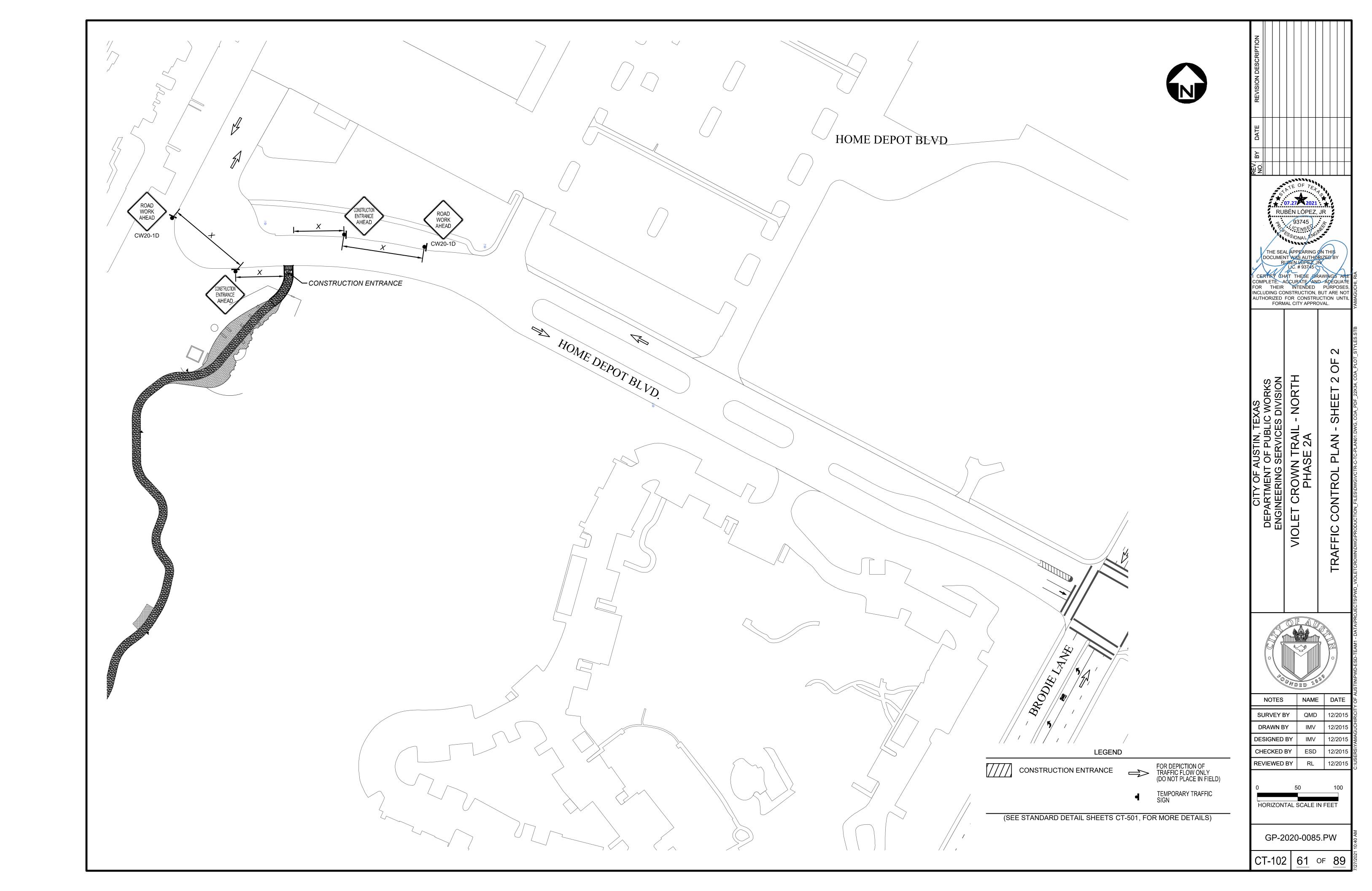


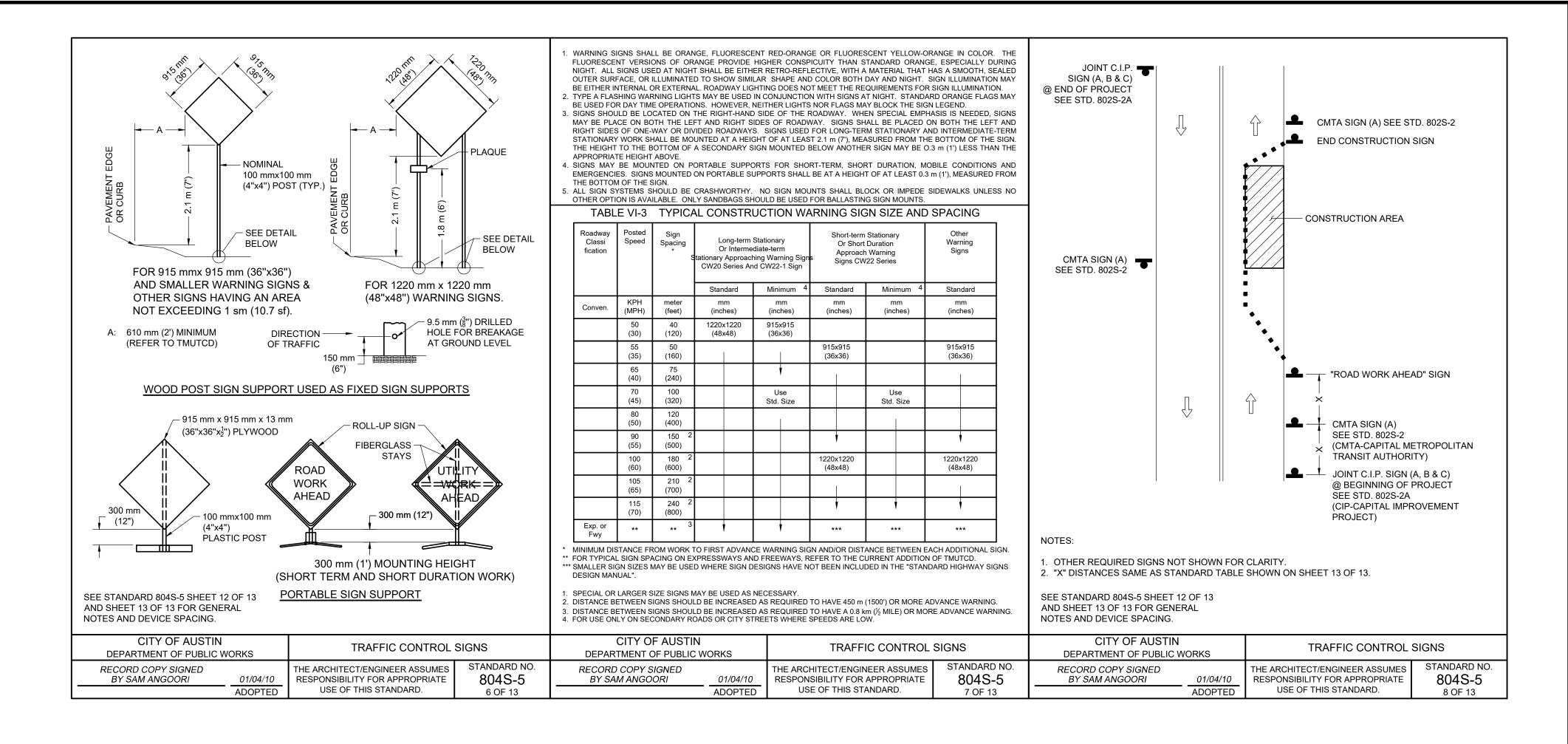
Engineering Services DIVISION

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- ALL TRAFFIC CONTROL DEVICES, SIGNS, BARRICADES AND WARNING SIGNS SHALL BE FURNISHED, PLACED, CONSTRUCTED AND MAINTAINED IN THE APPROPRIATE TYPES AND SIZES AND FLAGGER OPERATIONS EXECUTED IN ACCORDANCE WITH THE CURRENT EDITION OF THE TEXAS MANUAL ON UNIFORM CONTROL DEVICES (TMUTCD), THE CITY OF AUSTIN STANDARD SPECIFICATIONS SERIES 800 AND THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL, OR AS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. IF A CONFLICT ARISES THEN THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL SHALL CONTROL UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
- THE CONTRACTOR SHALL NOTIFY THE TRANSPORTATION DIVISION OF THE DEPARTMENT OF PUBLIC WORKS AT 974-7024 NO LATER THAN THE MONDAY OF THE WEEK DURING WHICH THE CONTRACTOR INTENDS TO SET UP BARRICADES TO START CONSTRUCTION.
- PROPOSED CONSTRUCTION TRAFFIC MOVEMENTS MAY REQUIRE EXISTING SIGNAL HEADS TO BE RELOCATED. THE CITY OF AUSTIN WILL REVIEW SIGNAL HEAD LOCATIONS DURING CONSTRUCTION AND PERFORM THE REQUIRED ADJUSTMENTS. THE CONTRACTOR SHALL CONTACT THE TRANSPORTATION DIVISION OF THE DEPARTMENT OF PUBLIC WORKS AT 974-7024, THREE (3) DAYS PRIOR TO PLACEMENT ANY TRAFFIC CONTROLS WHICH MAY REQUIRE SIGNAL HEAD ADJUSTMENTS/RELOCATION.
- THE CONTRACTOR SHALL PROVIDE ONE (1) FULL-TIME OFF-DUTY, UNIFORMED AUSTIN POLICE DEPARTMENT CERTIFIED PEACE OFFICER AND ONE (1) VEHICLE OF THE TYPE APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE FOR TEMPORARY LANE CLOSURES WHEN UNDER SEALING, MILLING, PAVING AND WHEN WORKING IN INTERSECTIONS AS PART OF THE TRAFFIC CONTROL OPERATIONS. THE PEACE OFFICER SHALL BE ABLE TO SHOW PROOF OF CERTIFICATION BY THE TEXAS COMMISSION ON LAW ENFORCEMENT OFFICER STANDARDS.
- THE CONTRACTOR SHALL NOTIFY ALL OTHER GOVERNMENTAL AGENCIES WHOSE RIGHTS-OF-WAY ARE AFFECTED BY HIS WORK ACTIVITIES. THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL TRAFFIC CONTROL DEVICES THAT THEY MAY NEED.
- THE CONTRACTOR SHALL MAINTAIN ONE (1) DUST-FREE LANE OF TRAFFIC IN EACH DIRECTION AT ALL TIMES. UNLESS OTHERWISE NOTED IN THE DRAWINGS OR APPROVED THE ENGINEER OR DESIGNATED
- THERE SHALL BE A MINIMUM OF THREE (3) METERS (10 FEET) CLEAR WIDTH FOR EACH LANE OF TRAFFIC IN CHANNELIZED AREAS, UNLESS OTHERWISE NOTED ON THE DRAWINGS OR APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
- 8. THE CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS AT ALL TIMES. IF ACCESS CANNOT BE MAINTAINED, THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER OR DESIGNATED REPRESENTATIVE SHALL PROVIDE AT LEAST 24 HOUR WRITTEN NOTICE OF LIMITED ACCESS TO AFFECTED PROPERTY OWNERS. THE CONTRACTOR SHALL PROVIDE BUSINESS ACCESS SIGNS AS NEEDED TO INFORM DRIVERS OF THE LOCATIONS OF ALL DRIVEWAYS.
- TEMPORARY LANE CLOSURES IN THE CENTRAL BUSINESS DISTRICT (CBD) OR ON ARTERIAL STREETS SHALL NOT BE PERMITTED DURING THE HOURS OF 7 AM TO 9 AM AND 4 PM TO 6PM MONDAY THROUGH FRIDAY UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE TRANSPORTATION DIVISION.
- 10. TRAFFIC CONTROL SHOWN ON STANDARD DETAILS IS TYPICAL. ADDITIONAL SIGNING AND/OR BARRICADING, AS WELL AS TEMPORARY PAVEMENT MARKINGS AND OBLITERATION/RESTORATION OF EXISTING PAVEMENT MARKINGS, MAY BE REQUIRED DEPENDING ON FIELD CONDITIONS. FIELD ADJUSTMENTS TO TRAFFIC CONTROLS WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO ITEM NO. 803S "BARRICADES, SIGNS AND TRAFFIC HANDLING".
- 1. THE CONTRACTOR SHALL DESIGNATE A COMPETENT PERSON FOR TRAFFIC CONTROL. THE COMPETENT PERSON SHALL MAKE INSPECTIONS OF THE TRAFFIC CONTROL DEVICES AT LEAST TWO (2) TIMES A DAY (ONCE AT THE BEGINNING OF THE DAY AND ONCE AT THE END OF THE DAY), INCLUDING NON-WORKING DAYS, ENSURING THAT ALL DEVICES ARE IN THEIR PROPER PLACE AND ARE IN WORKING ORDER.
- 12. ALL DEVICES SHALL BE MADE USING MATERIALS LISTED ON THE TXDOT APPROVED PRODUCTS LIST.

CITY OF AUSTIN SIGNING AND BARRICADING DEPARTMENT OF PUBLIC WORKS CROSSROAD & DRIVEWAY	CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS GENERAL TRAFFIC CONTROL NOTES
RECORD COPY SIGNED BY SAM ANGOORI 01/04/10 ADOPTED THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 804S-5 12 OF 13	RECORD COPY SIGNED BY SAM ANGOORI 01/04/10 ADOPTED THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD 804S-1

- 13. ALL PERSONS WORKING WITHIN THE RIGHT-OF-WAY SHALL WEAR A BRIGHTLY COLORED SAFETY VEST. FOR
- 14. WHEN AN INTERSECTION IS CLOSED FOR CONSTRUCTION, THE CONTRACTOR SHALL PROCEED WITH CONSTRUCTION IN SUCH A MANNER THAT THE CLOSURE TIME IS MINIMIZED.
- 15. THE CONTRACTOR SHALL NOTIFY THE CAPITAL METRO DISPATCHER AT 385-4295 ONE (1) WEEK PRIOR TO

LANE CLOSURES ADJACENT TO BUS STOPS. **DURATION OF WORK**

NIGHTTIME WORK THE VEST SHALL BE RETRO-REFLECTIVE.

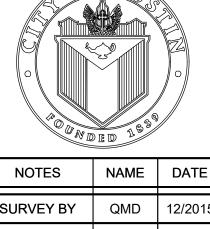
WORK DURATION IS A MAJOR FACTOR IN DETERMINING THE NUMBER AND TYPES OF DEVICES USED IN TEMPORARY TRAFFIC ZONES. THE FIVE (5) CATEGORIES OF WORK DURATION AND THEIR TIME AT A LOCATION ARE AS FOLLOWS:

- LONG-TERM STATIONARY-WORK THAT OCCUPIES A LOCATION FOR MORE THAN 3 DAYS.
- INTERMEDIATE-TERM STATIONARY-WORK THAT OCCUPIES A LOCATION FROM OVERNIGHT TO 3 DAYS.
- SHORT-TERM STATIONARY-DAYTIME WORK THAT OCCUPIES A LOCATION FROM 1 TO 12 HOURS.
- SHORT-DURATION WORK THAT OCCUPIES A LOCATION UP TO 1 HOUR.

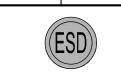
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			Minimum Desirable Taper Lengths (L) Meters (Feet)			Suggest Device S		Suggested Sign Spacing Meters (Feet)
Speed KMPH	Posted Speed MPH	Formula	3.0(10) Offset Meters (feet)	3.3(11) Offset Meters (feet)	3.6(12) Offset Meters (feet)	On a taper Meters (feet)	On a tangent Meters (feet)	"X" Dimension
50	30		45 (150)	50 (165)	55 (180)	9 (30)	15-20 (50-65)	40 (120)
55	35	$L=\frac{WS}{60}^2$	65 (205)	70 (225)	75 (245)	10 (35)	20-25 (65-80)	50 (160)
65	40		80 (265)	90 (295)	100 (320)	12 (40)	25-30 (80-100)	75 (240)
70	45		135 (450)	150 (495)	165 (540)	13 (45)	25-30 (80-100)	100 (320)
80	50		150 (500)	165 (550)	180 (600)	15 (50)	30-35 (100-110)	120 (400)
90	55	1 - 14/6	165 (550)	185 (605)	200 (660)	16 (55)	35-40 (110-130)	150 (500)
95	60	L=WS	180 (600)	200 (660)	220 (720)	18 (60)	40-45 (130-150)	180 (600)
105	65		195 (650)	215 (715)	235 (780)	19 (65)	45-50 (150-165)	210 (700)
115	70		215 (700)	235 (770)	255 (840)	21 (70)	50-55 (165-180)	240 (800)

RUBÉN LÓPEZ, JR 93745 THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY
RUBEN LOPEZ JR
LIC. # 93745

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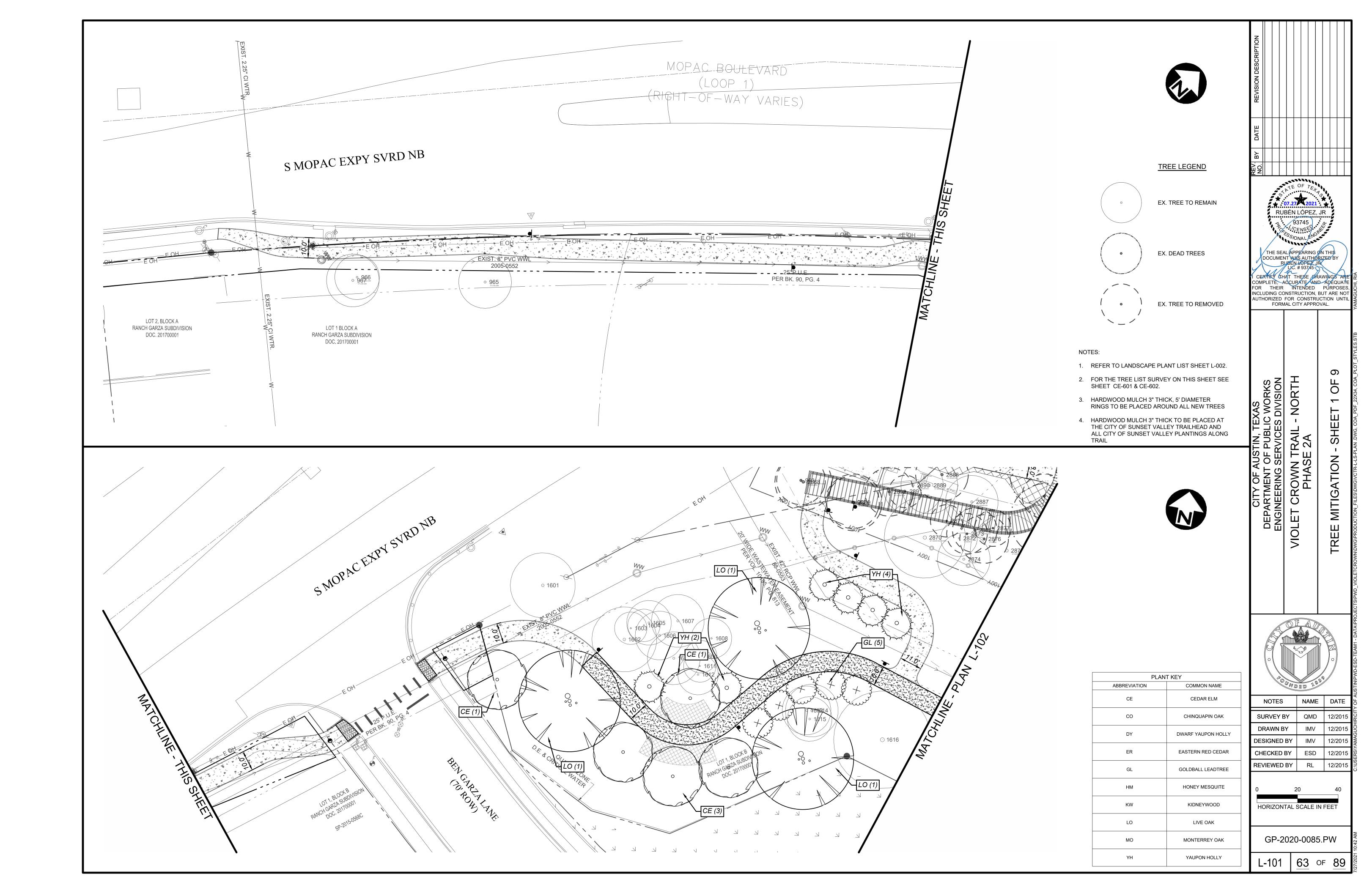


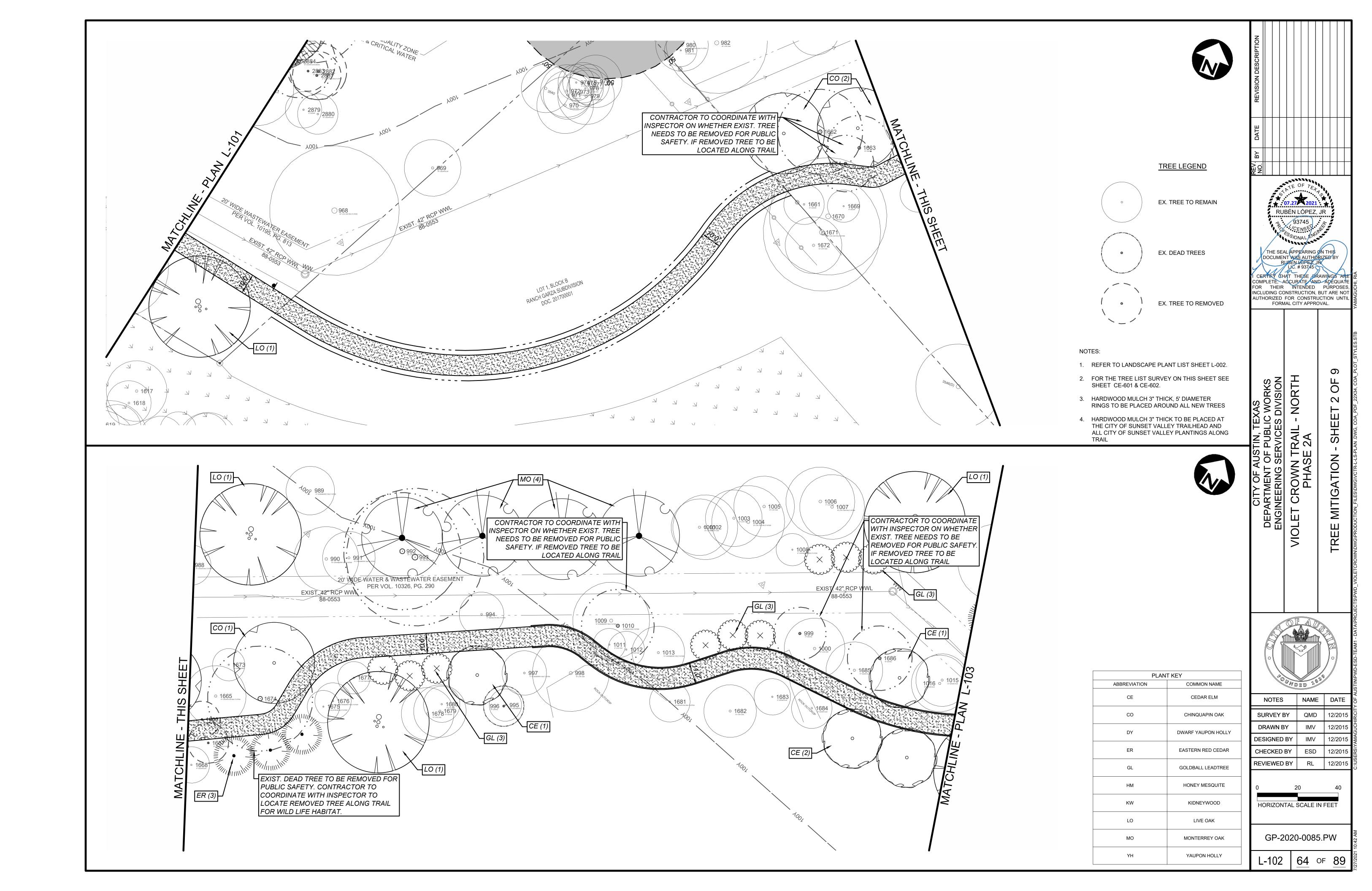
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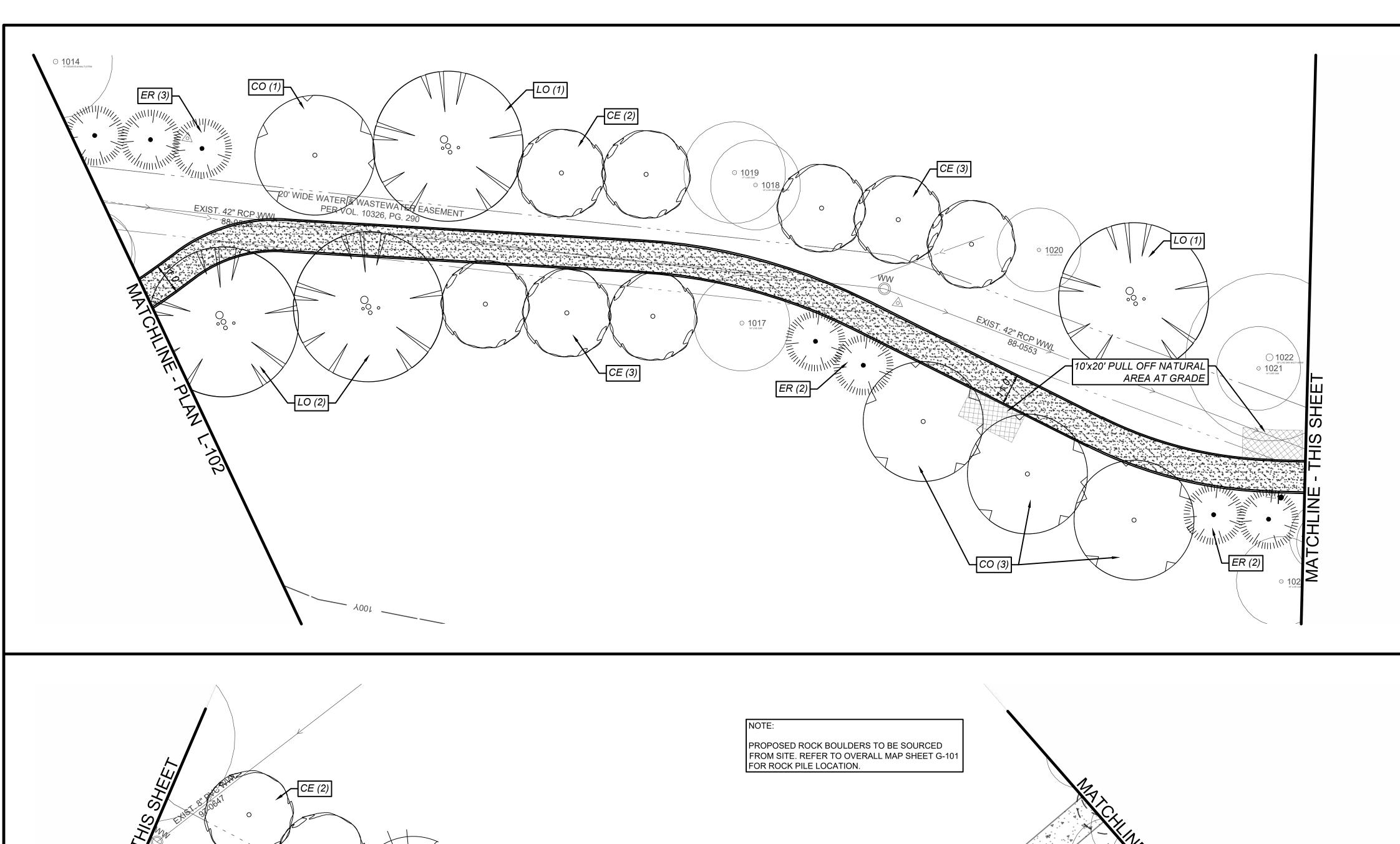


Engineering Services DIVISION

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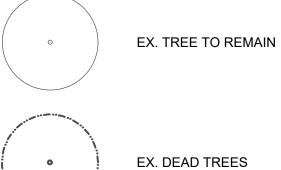




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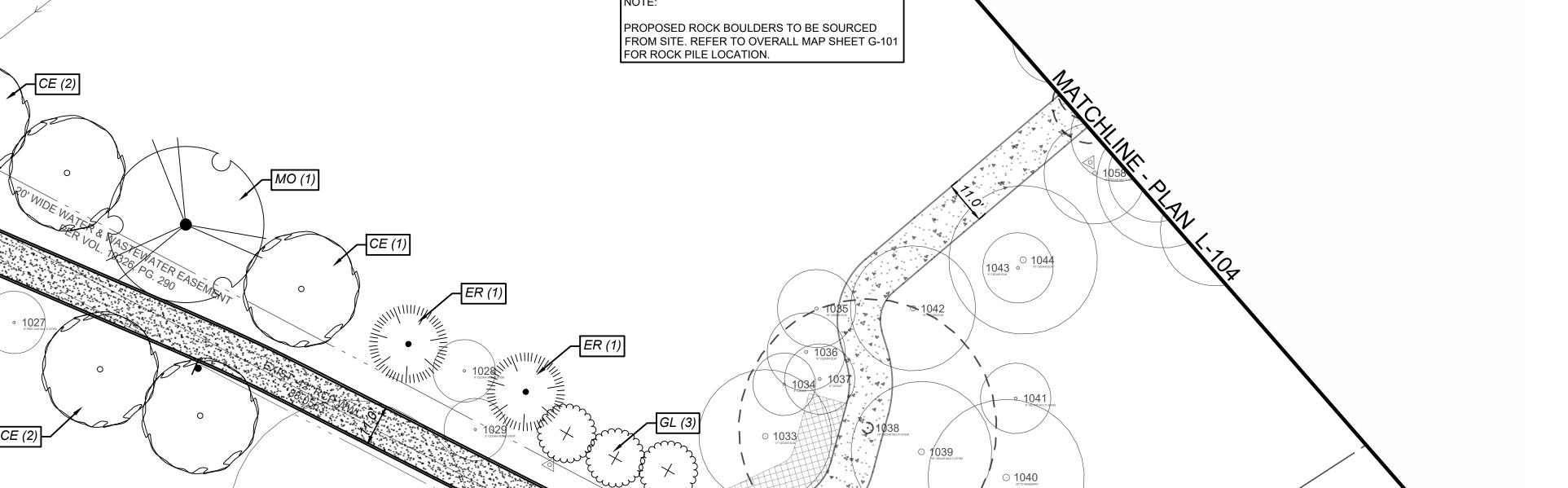
TREE LEGEND





NOTES:

- 1. REFER TO LANDSCAPE PLANT LIST SHEET L-002.
- 2. FOR THE TREE LIST SURVEY ON THIS SHEET SEE SHEET CE-601 & CE-602.
- 3. HARDWOOD MULCH 3" THICK, 5' DIAMETER RINGS TO BE PLACED AROUND ALL NEW TREES
- 4. HARDWOOD MULCH 3" THICK TO BE PLACED AT THE CITY OF SUNSET VALLEY TRAILHEAD AND ALL CITY OF SUNSET VALLEY PLANTINGS ALONG



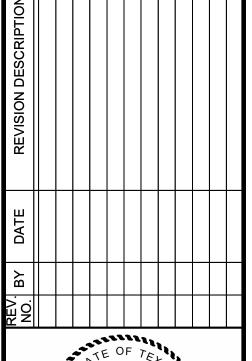
BOULDERS (5)

10'x50' PULL OFF NATURAL AREA AT GRADE

PLAN	T KEY							
ABBREVIATION	COMMON NAME							
CE	CEDAR ELM							
СО	CHINQUAPIN OAK							
DY	DWARF YAUPON HOLLY							
ER	EASTERN RED CEDAR							
GL	GOLDBALL LEADTREE							
НМ	HONEY MESQUITE							
KW	KIDNEYWOOD							
LO	LIVE OAK							

MONTERREY OAK

YAUPON HOLLY

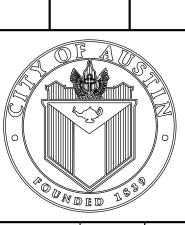




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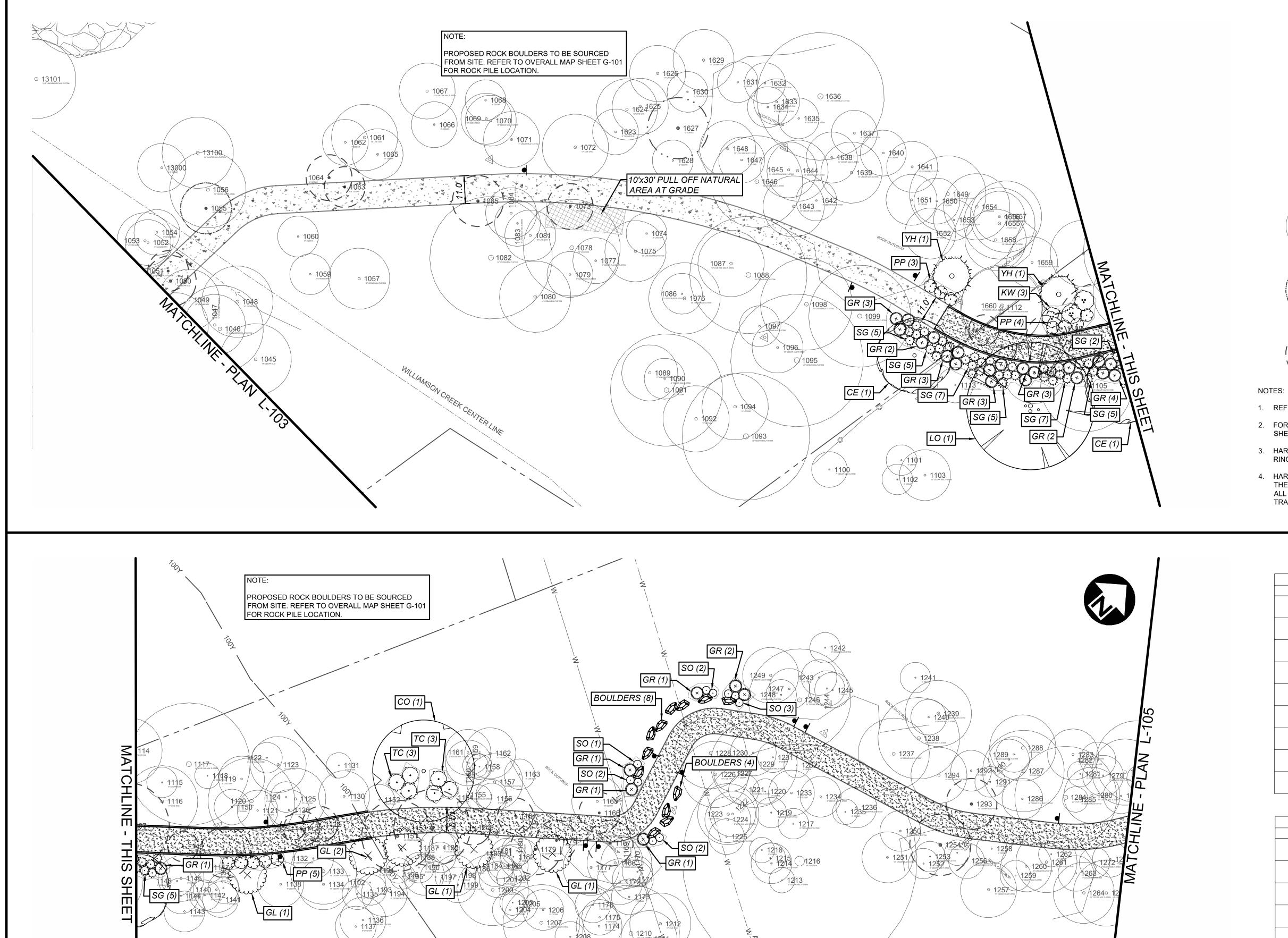
I CERTIFY CHAT THESE BRAWINGS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THEIR INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL FORMAL CITY APPROVAL.

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TREE LEGEND

EX. TREE TO REMAIN EX. DEAD TREES



- 1. REFER TO LANDSCAPE PLANT LIST SHEET L-002.
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- 4. HARDWOOD MULCH 3" THICK TO BE PLACED AT THE CITY OF SUNSET VALLEY TRAILHEAD AND ALL CITY OF SUNSET VALLEY PLANTINGS ALONG TRAIL

PLAI	NT KEY
ABBREVIATION	COMMON NAME
AG	AGARITA
BG	BASKET GRASS
LA	LANTANA
RR	ROCK ROSE
PP	SPINELESS PRICKLY PEAR
SO	SIDE OATS GRAMMA
SG	SWITCH GRASS
TC	TURK'S CAP
GR	TALL GOLDENROD

PLA	NT KEY
ABBREVIATION	COMMON NAME
CE	CEDAR ELM
СО	CHINQUAPIN OAK
DY	DWARF YAUPON HOLLY
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НМ	HONEY MESQUITE
KW	KIDNEYWOOD
LO	LIVE OAK
MO	MONTERREY OAK
YH	YAUPON HOLLY

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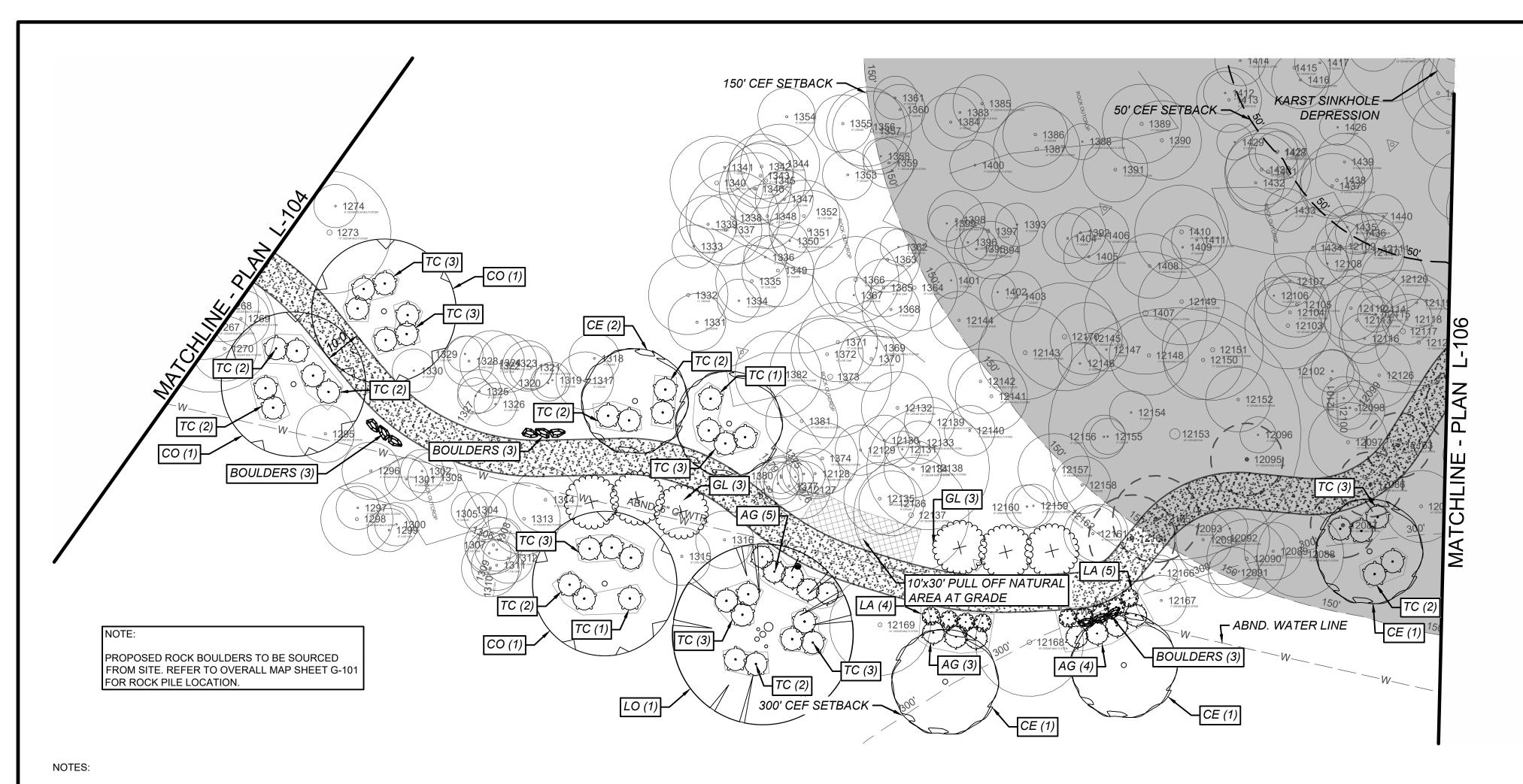
DOCUMENT WAS AUTHORIZED BY
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TREE LEGEND

EX. TREE TO REMAIN

EX. DEAD TREES

EX. TREE TO REMOVED

EX. TREE TO REMOVED IN SUNSET VALLEY

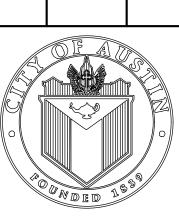
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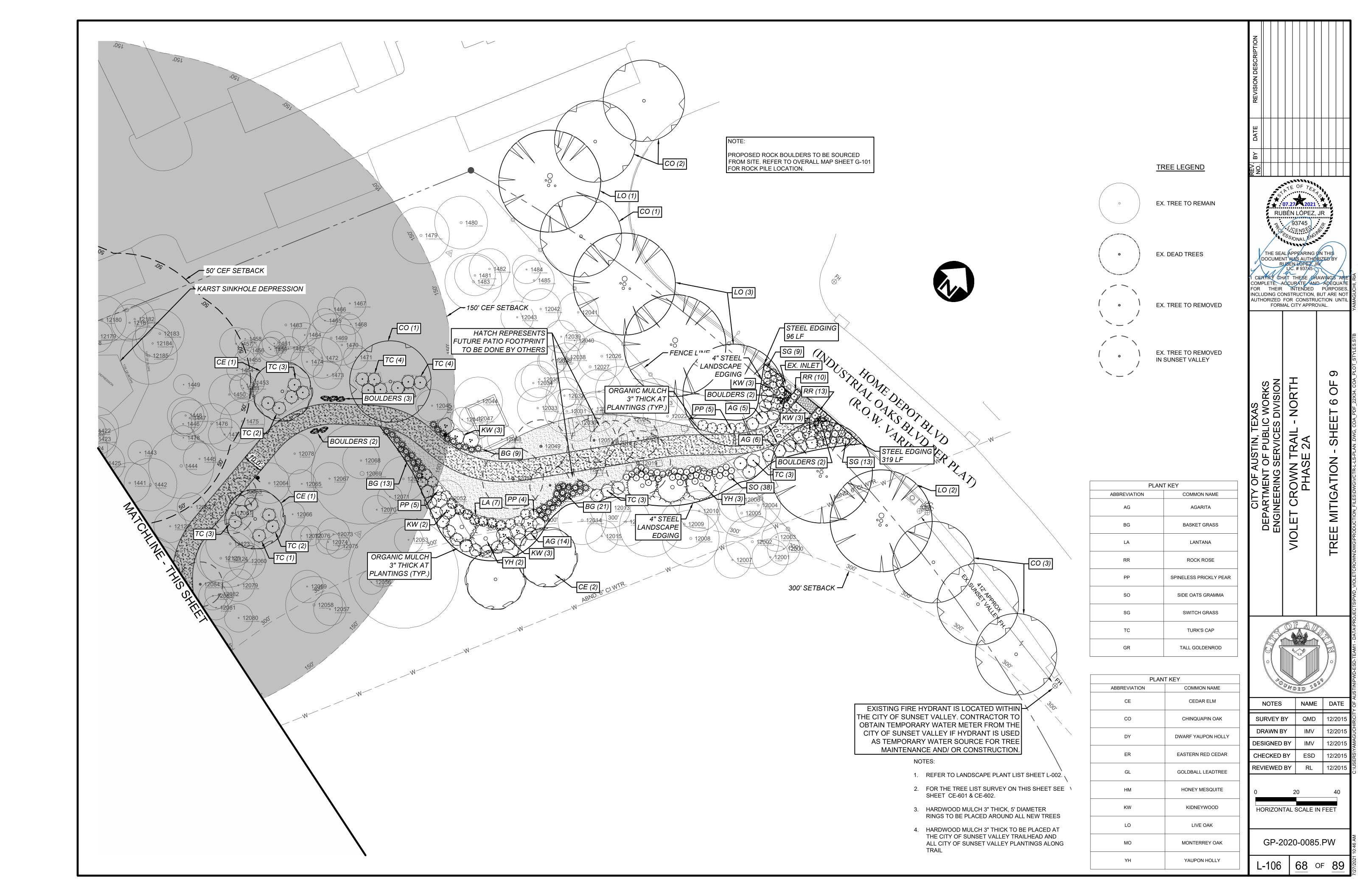
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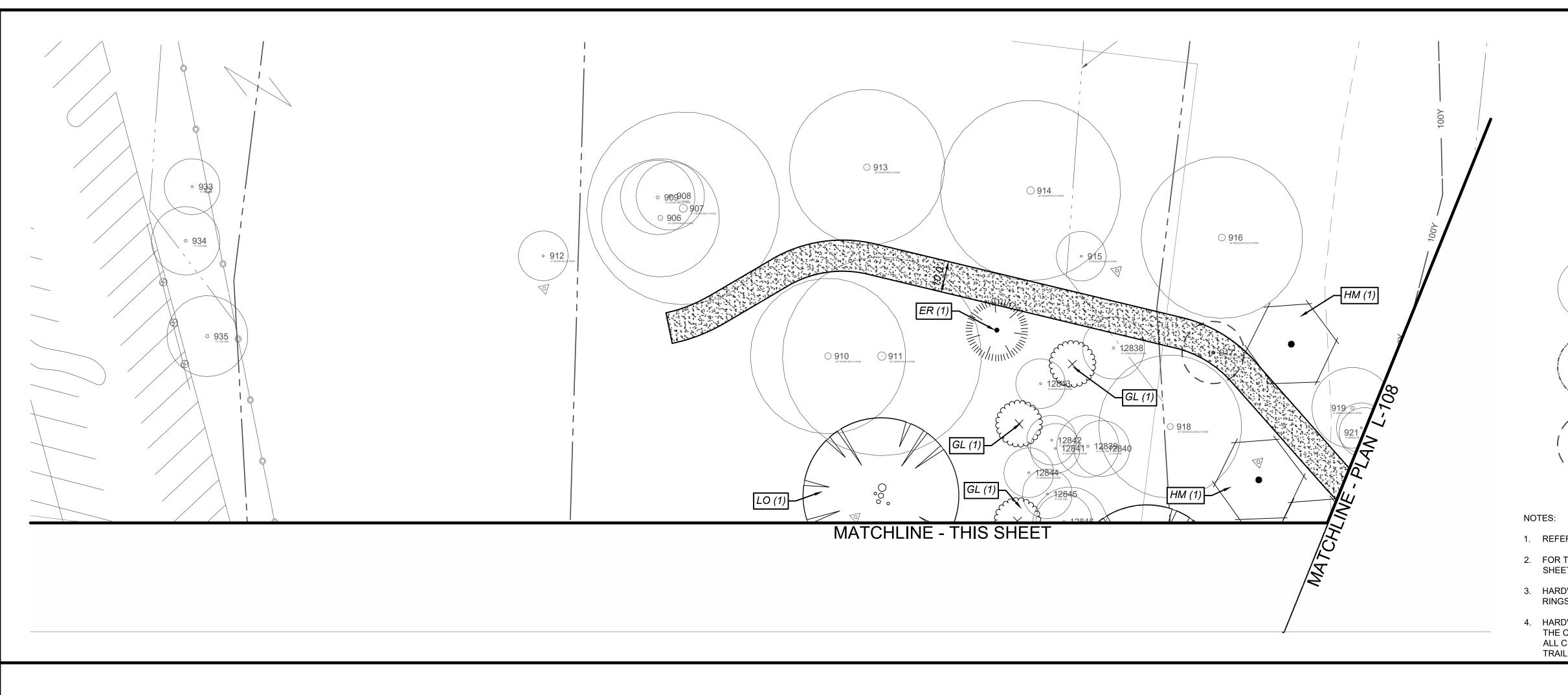
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TREE LEGEND

o EX. TREE TO REMAIN

EX. DEAD TREES

• EX. TREE TO REMOVED

- 1. REFER TO LANDSCAPE PLANT LIST SHEET L-002.
- FOR THE TREE LIST SURVEY ON THIS SHEET SEE SHEET CE-601 & CE-602.
- 3. HARDWOOD MULCH 3" THICK, 5' DIAMETER RINGS TO BE PLACED AROUND ALL NEW TREES
- 4. HARDWOOD MULCH 3" THICK TO BE PLACED AT THE CITY OF SUNSET VALLEY TRAILHEAD AND ALL CITY OF SUNSET VALLEY PLANTINGS ALONG TRAIL



MATCHLINE - THIS SHEET ER (1)	MATCHLINE - THIS SHEET	
NOTE PROPOSED DOOK SOULDERS TO SE SOURCED PROM SILE FRENCH IG OVERALI MAP SHEFT G-IDI POR ROCK PILE LOCATION CEL (1) CEL (1) CEL (2) CEL (2) CEL (2) CEL (3) CEL (3) CEL (4) CEL (4) CEL (7) C		
	NOTE: PROPOSED ROCK BOULDERS TO BE SOURCED PROM SITE. REFER TO OVERALL MAP SHEET G-101 TO'R ROCK PILE LOCATION 12850 12850 12850 12850 W W W	• 924

PLAN	T KEY
ABBREVIATION	COMMON NAME
CE	CEDAR ELM
со	CHINQUAPIN OAK
DY	DWARF YAUPON HOLLY
ER	EASTERN RED CEDAR
GL	GOLDBALL LEADTREE
НМ	HONEY MESQUITE
KW	KIDNEYWOOD
LO	LIVE OAK
МО	MONTERREY OAK
YH	YAUPON HOLLY

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NOTES	NAME	DAT

RUBÉN LÓPEZ, JR

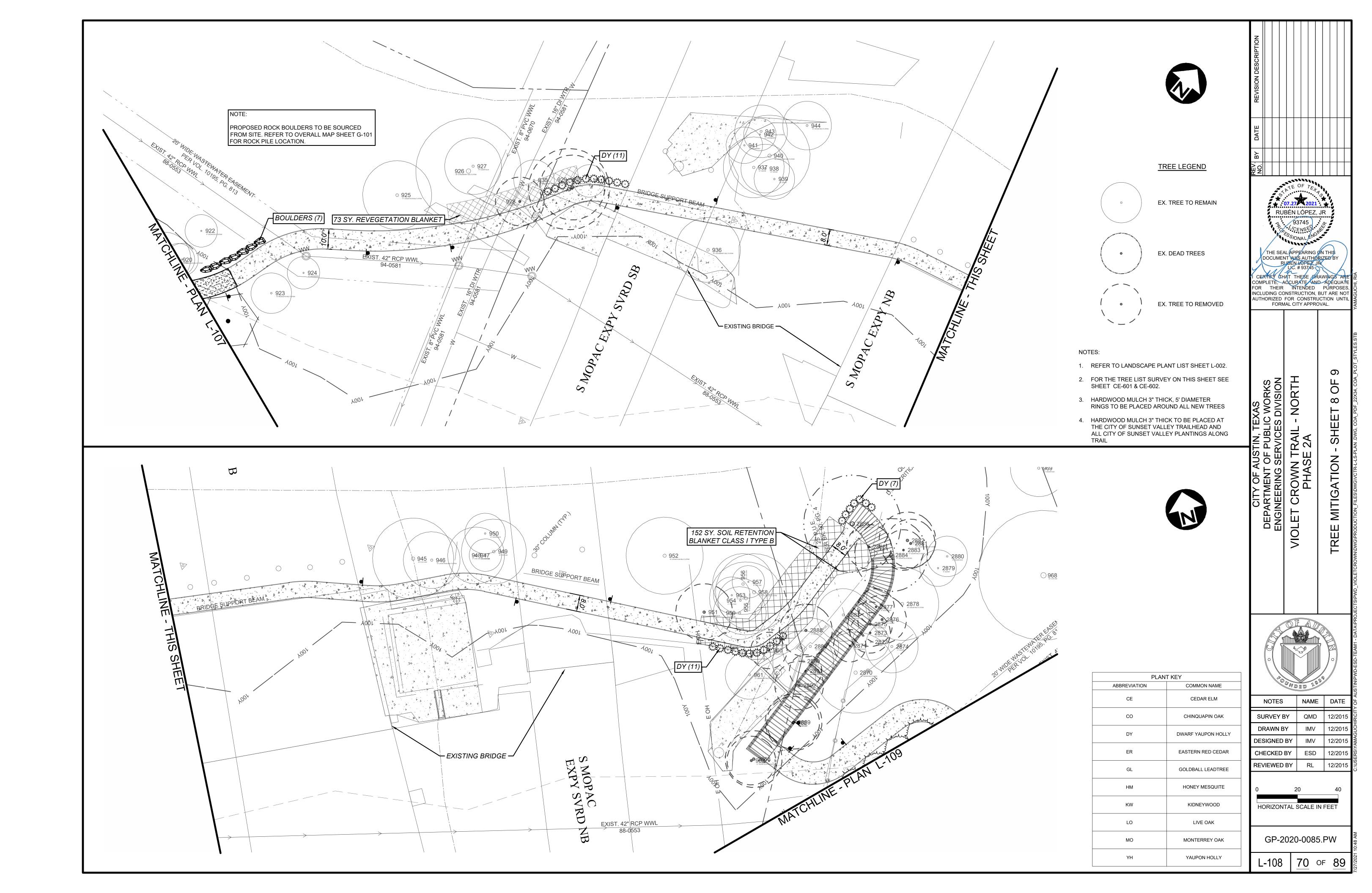
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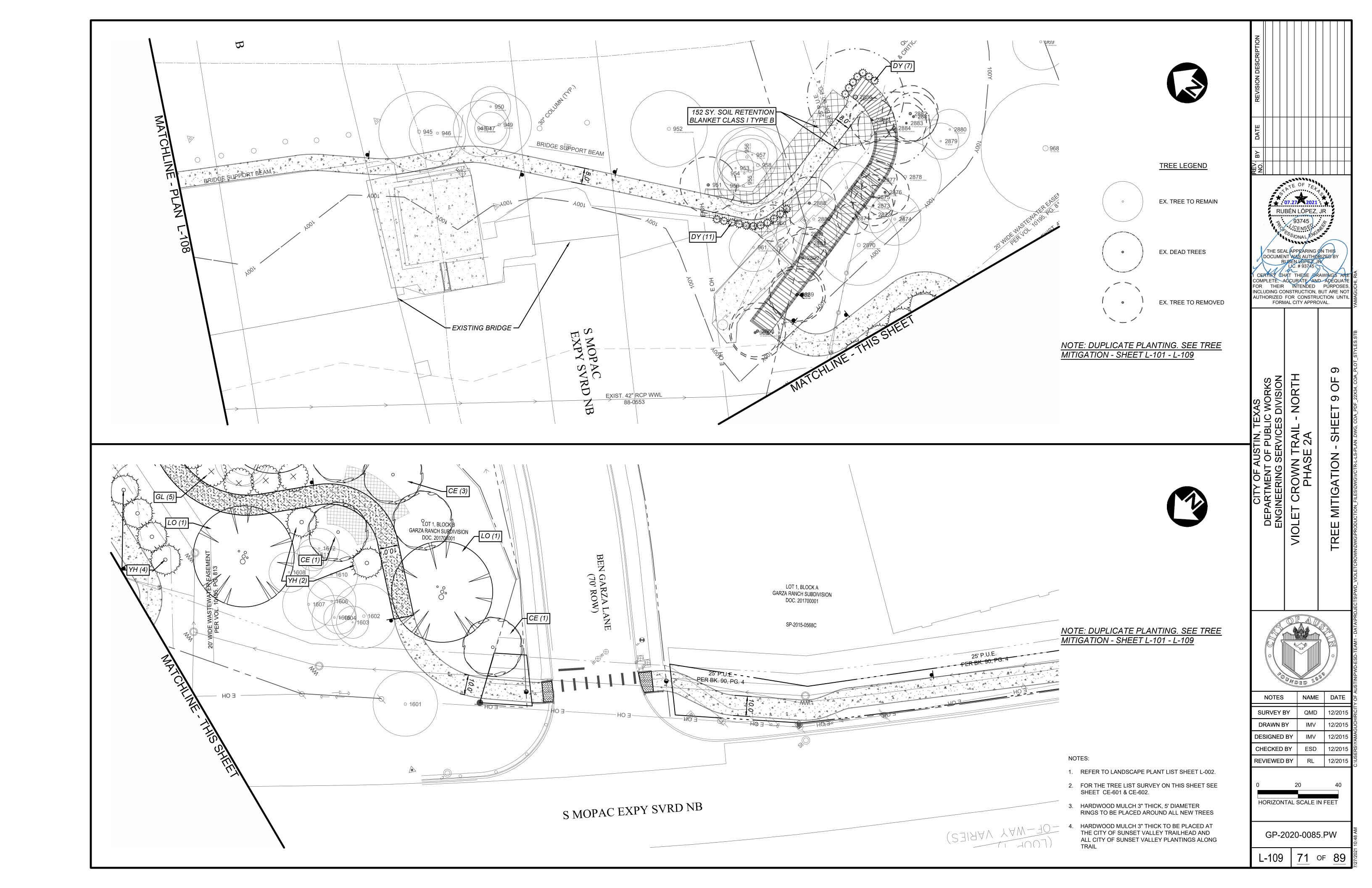
I CERTIFY CHAT THESE TRAWINGS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THEIR INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL FORMAL CITY APPROVAL.

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REVIEWED BY	RL	12/2015	C:\US			
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CITY OF AUSTIN MITIGATION TABLE

MITIGATION REQUIRED

	CATEGORY	ON APPENDIX F 8"-18"		ON APPENDIX F 19" +	NOT ON APPENDIX F 19" +	HERITAGE
STANDARD	TOTAL INCHES	278	0	53	0	0
MITIGATION FOR	MITIGATION PERCENTAGE	50%	25%	100%	50%	300%
ALL TREES	INCHES TO BE REPLACED	139	0	53	0	0
	TOTAL CALIPER INCHES REMOVED					331
	TOTAL CALIPER INCHES REQU	IRED TO BE MI	TIGATED			192

MITIGATION PROVIDED

TREE SPECIES				TOTAL # IN DESIGN	TREE SIZE - INCHES	TOTAL INCHES
Live Oak				15	3	45
Chinquapin Oak				7	3	21
Cedar Elm				22	3	66
Monterrey Oak				7	3	21
Goldenball Leadtree				23	2	46
Eastern Red Cedar				18		36
Honey Mesquite				3		6
Yaupon Holly 'Pride of						
Houston'				6	2	12
	INCHES PROPOSED FOR MITIG	ATION PLANTI	NG	l		192
	ADDITIONAL INCHES PROPOSE	D				61
TOTAL INCHES PROPOSED					253	

ADDITIONAL TREES TO BE PLANTED

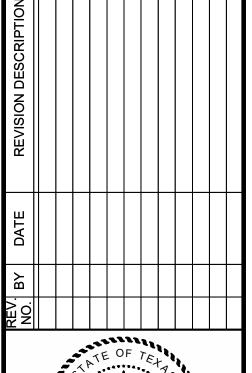
TREE SPECIES				TOTAL # FOR ADDITIONAL	TREE SIZE - INCHES	TOTAL INCHES
Chinquapin Oak				3	3	9
Cedar Elm				7	3	21
Monterrey Oak				3	3	9
Goldenball Leadtree				3	2	6
Eastern Red Cedar				4	2	8
Yaupon Holly 'Pride of Houston'				4	2	8
ADDITIONAL INCHES PROPOSED					61	

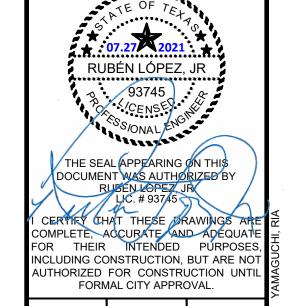
CITY OF SUNSET VALLEY MITIGATION TABLE

		TREES LESS	PROTECTED	HERITAGE	ANCESTRAL	
	CATEGORY	THAN 10"	TREES - 10"+	TREES - 24" +	TREES - 30" +	TOTALS
STANDARD	TOTAL INCHES	140.5	206	0	0	346.5
MITIGATION FOR	MITIGATION	0	1	2	3	0
ALL TREES	INCHES TO BE REPLACED	0	206	0	0	206
TOTAL CALIPER INCHES REMOVED					346.5	
TOTAL CALIPER INCHES REQUIRED TO BE MITIGATED					206	

TREE SPECIES			OTAL # IN ESIGN	TREE SIZE - INCHES	TOTAL INCHES
Live Oak			8	4	32
Chinquapin Oak			11	4	44
Cedar Elm			11	4	44
Yaupon Holly 'Pride					
of Houston'			7	2	14
Goldenball Leadtree			11	2	22
INCHES PROPOSED FOR TREE MIT INCHES PROPOSED FOR PLANTING TOTAL CALIPER INCHES REQUIRED	G BEDS (1/4 OF TOTAL INCHE	•			156 50 206

^{*} PER AGREEMENT BETWEEN CITY OF AUSTIN AND CITY OF SUNSET VALLEY, 50" OF PLANTING BEDS TO REPLACE 50" OF TREE CALIPER

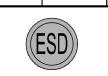




CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
VIOLET CROWN TRAIL - NORTH
PHASE 2A



NOTES	NAME	DATE
SURVEY BY	QMD	12/2015
DRAWN BY	IMV	12/2015
DESIGNED BY	IMV	12/2015
CHECKED BY	ESD	12/2015
REVIEWED BY	RL	12/2015



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LANDSCAPE PLANTING NOTES

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- 1. INFORMATION PROVIDED ON THIS PLAN IS GENERAL IN NATURE. DIMENSIONS, LOCATIONS, AND AREAS ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED BEFORE INSTALLATION.
- 2. INSTALLED QUANTITIES OF PLANT MATERIALS MAY VARY FROM THOSE SHOWN ON THE PLAN AND SHOULD BE FIELD DETERMINED ACCORDING TO APPROPRIATE PLANT SPACING AND FIELD CONDITIONS. DISCREPANCIES BETWEEN THE FIELD CONDITIONS AND THE PLAN WHICH LIMIT THE CONTRACTOR SHOULD BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT OR PROJECT LANDSCAPE REPRESENTATIVE BEFORE INSTALLATION OF THE AREA IN QUESTION IS COMPLETE.
- 3. SUBSTITUTION OF PLANT SPECIES, SIZES, OR OTHER SPECIFIED MATERIALS WILL NOT BE ALLOWED WITHOUT PRIOR APPROVAL BY THE LANDSCAPE ARCHITECT OR PROJECT LANDSCAPE REPRESENTATIVE.
- 4. ALL PLANT MATERIAL MUST CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARD FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN HORTICULTURE INDUSTRY ASSOCIATION OR FOLIVALENT
- 5. ALL PLANT MATERIAL MUST BE APPROVED BY THE LANDSCAPE ARCHITECT OR PROJECT LANDSCAPE REPRESENTATIVE PRIOR TO PLANTING.
- 6. INSTALLATION OF ALL LANDSCAPING MUST BE COORDINATED WITH THE INSTALLATION OF RELATED IRRIGATION, SITE WORK, AND GRADING.
- 7. EXISTING TREES TO BE SAVED MUST BE PROTECTED BEFORE CONSTRUCTION BEGINS. SEE "TREE PROTECTION AND ENVIRONMENTAL NOTES" SHEET FOR TREE PROTECTION LOCATIONS AND TREE PROTECTION DETAILS. NO EQUIPMENT OR MATERIALS SHALL BE STORED OR OPERATED WITHIN THE FENCED AREAS
- 8. THE OWNER WILL CONTINUOUSLY MAINTAIN THE REQUIRED LANDSCAPING IN ACCORDANCE WITH THE LDC 25-2-984
- 9. LANDSCAPE ARCHITECT OR PROJECT LANDSCAPE REPRESENTATIVE CAN BE CONTACTED AT 512.974.7006.

TREES - SPECIAL CONSTRUCTION TECHNIQUES

- 10. BEFORE EXCAVATION WITHIN TREE DRIP LINES OR THE REMOVAL OF TREES NEXT TO OTHER TREES THAT ARE TO REMAIN, MAKE A CLEAN CUT BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT TO MINIMIZE ROOT DAMAGE.
- 11. CRITICAL ROOT ZONE AREAS THAT CANNOT BE PROTECTED DURING CONSTRUCTION WITH FENCING AND WHERE HEAVY VEHICULAR TRAFFIC IS ANTICIPATED MUST BE COVERED WITH A MINIMUM OF 12 INCHES OF ORGANIC MULCH TO MINIMIZE SOIL COMPACTION. IN AREAS WITH HIGH SOIL PLASTICITY, PLACE GEOTEXTILE FABRIC (PER STANDARD SPEC. 620S) UNDER THE MULCH TO PREVENT EXCESSIVE MIXING OF THE SOIL AND MULCH. ADDITIONAL MATERIALS SUCH AS PLYWOOD MAY BE REQUIRED BY THE CITY ARBORIST TO MINIMIZE ROOT IMPACTS FROM HEAVY EQUIPMENT. ONCE THE PROJECT IS COMPLETE, SUPPLEMENTAL ROOT-PROTECTION MATERIALS SHOULD BE REMOVED AND MULCH COVER REDUCED FROM 12 TO 3 INCHES DEEP.
- 12. PERFORM ALL GRADING WITHIN CRITICAL ROOT ZONE AREAS BY HAND OR WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE.
- 13. WATER ALL TREES IMPACTED BY CONSTRUCTION ACTIVITIES DEEPLY ONCE A WEEK DURING PERIOD OF HOT, DRY WEATHER. SPRAY TREE CROWNS WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
- 14. WHEN INSTALLING CONCRETE ADJACENT TO THE ROOT ZONE OF A TREE, USE A PLASTIC VAPOR BARRIER BEHIND THE CONCRETE TO PROHIBIT LEACHING OF LIME INTO THE SOIL.

TREES - FERTILIZER

15. HUMATE/NUTRIENT SOLUTIONS WITH MYCORRHIZAE COMPONENTS OR SOIL INJECTION AT RECOMMENDED RATES ARE TO BE USED WHEN APPROPRIATE. CONSTRUCTION WHICH WILL BE COMPLETED IN LESS THAN 90 DAYS MAY USE MATERIAL AT HALF THE RECOMMENDED RATES. ALTERNATIVE ORGANIC FERTILIZER MATERIALS ARE ACCEPTABLE WHEN APPROVED BY THE CITY ARBORIST.

TREES - TREE PROTECTION SIGNAGE

16. A LAMINATED SIGN (MIN. SIZE 8.5X11 INCHES) SHALL BE POSTED ON EACH TREE PROTECTIVE DEVICE AND AT LEAST EVERY 100 LINEAR FEET ON PROTECTIVE FENCING, IDENTIFYING THE FOLLOWING: TREE & ROOT PROTECTION ZONE, PER CITY OF AUSTIN CODE (CHAPTER 25-8, SUBCHAPTER B, ARTICLE 1). TREE PROTECTION AND SIGNAGE IS TO REMAIN IN PLACE FOR THE ENTIRETY OF THE CONSTRUCTION. SEE SHEET L-501 FOR DETAIL.

SEQUENCE OF TREE CARE NOTES

- ANALYSIS (SOIL, FOLIAR, PRUNING, NUTRIENT, ETC.) AND REVIEW OF EACH TREE IMPACTED BY CONSTRUCTION BY CERTIFIED ARBORIST.
- 2. COORDINATE RECOMMENDATIONS WITH GENERAL PERMIT OFFICE. COORDINATE ALL PRECONSTRUCTION
- ACTIVITIES (INCLUDING PRUNING) WITH GENERAL PERMIT OFFICE.

 3. PRUNE TREES AND APPLY PRECONSTRUCTION NUTRIENTS
- 4. INSTALL TREE PROTECTION (FENCING, BOARDING, ETC.)
- 5. MONITOR CONDITION OF TREES DURING CONSTRUCTION. COORDINATE ANY RECOMMENDATIONS AND IMPLEMENTATION FOR TREE CARE WITH GENERAL PERMIT OFFICE DURING CONSTRUCTION PERIOD (E.G. WATER, ADDITIONAL PRUNING, NUTRIENTS, TREE PROTECTION).
- 6. FOLLOWING CONSTRUCTION, AERATE TREES WITH AIR INJECTION
- 6.1. SUPERSONIC NOZZLE, 90 PSIG, 150 SCFM, OR APPROVED EQUIVALENT
- 6.2. AERATE SOIL TO 6 INCH DEPTH OR GREATER AS RECOMMENDED BY CERTIFIED ARBORIST
- 6.3. REMOVE SOIL AND REPLACE WITH MULCH TO A DEPTH OF 3 INCHES
- 6.4. PROTECT AERATED SOIL AND MULCH UNTIL FINAL ACCEPTANCE. DO NOT ALLOW COMPACTION OF AERATED AREAS OR MULCH
- 7. APPLY POSTCONSTRUCTION FERTILIZATION
- 8. REMOVE TREE PROTECTION
- 9. FOR ANY QUESTIONS: LANDSCAPE ARCHITECT OR PROJECT LANDSCAPE REPRESENTATIVE CAN BE CONTACTED AT 512.974.7006.

NOTE: ALL TREE CARE INCLUDING PRUNING, AERATION, AND FERTILIZATION MUST BE COMPLETED BY A CERTIFIED ARBORIST.

APPENDIX O: LANDSCAPE IRRIGATION NOTES

SITE DEVELOPMENT PERMIT - IRRIGATION NOTES

AUTOMATIC IRRIGATION SYSTEMS SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS. THESE REQUIREMENTS SHALL BE NOTED ON THE SITE DEVELOPMENT PERMIT AND SHALL BE IMPLEMENTED AS PART OF THE LANDSCAPE INSPECTION:

1. A NEW COMMERCIAL AND MULTI-FAMILY IRRIGATION SYSTEM MUST BE DESIGNED AND INSTALLED SO THAT:

- (A) THERE IS NOT DIRECT OVERSPRAY ONTO NON-IRRIGATED AREAS
- (B) THE SYSTEM DOES NOT INCLUDE SPRAY IRRIGATION ON AREAS LESS THAN SIX (6) FEET WIDE (SUCH AS MEDIANS, BUFFER STRIPS, AND PARKING LOT ISLANDS)
- (C) ABOVE-GROUND IRRIGATION EMISSION DEVICES ARE SET BACK AT LEAST SIX (6) INCHES FROM IMPERVIOUS SURFACES
- (D) THE IRRIGATION SYSTEM HAS A MASTER VALVE
- (E) CIRCUIT REMOTE CONTROL VALVES HAVE ADJUSTABLE FLOW CONTROLS
- (F) SERVICEABLE IN-HEAD CHECK VALVES ARE ADJACENT TO PAVED AREAS WHERE ELEVATION DIFFERENCES MAY CAUSE LOW HEAD DRAINAGE
- (G) THE IRRIGATION SYSTEM HAS A CITY-APPROVED WEATHER BASED CONTROLLER
- (H) AN AUTOMATIC RAIN SHUT-OFF DEVICE SHUTS OFF THE IRRIGATION SYSTEM AUTOMATICALLY AFTER NOT MORE THAN ONE-HALF INCH $\binom{1}{2}$ ") RAINFALL
- (I) ZONE VALVES AND CIRCUITS ARE SEPARATED BASED ON PLANT WATER REQUIREMENTS
- (J) AN IRRIGATION EMISSION DEVICE (SUCH AS SPRAY, ROTOR, OR DRIP EMITTER) DOES NOT EXCEED THE MANUFACTURER'S RECOMMENDED OPERATING PRESSURE
- (K) NO COMPONENT OF THE IRRIGATION SYSTEM DEVIATES FROM THE MANUFACTURER'S RECOMMENDED USE OF THE PRODUCT.

2. THE MAXIMUM SPACING BETWEEN SPRAY OR ROTARY SPRINKLER HEADS MUST NOT EXCEED THE RADIUS OF THROW OF THE HEAD UNLESS MANUFACTURER OF THE SPRINKLER HEAD SPECIFICALLY RECOMMENDS A GREATER SPACING. THE RADIUS OF THROW IS DETERMINED BY REFERENCE TO THE MANUFACTURER'S SPECIFICATIONS FOR A SPECIFIC NOZZLE AT A SPECIFIC OPERATING PRESSURE.

3. THE IRRIGATION INSTALLER SHALL DEVELOP AND PROVIDE AN AS-BUILT DESIGN PLAN AND WATER BUDGET TO THE CITY AT THE TIME THE FINAL PLUMBING INSPECTION IS PERFORMED. THE WATER BUDGET SHALL INCLUDE:

- (A) A CHART CONTAINING ZONE NUMBERS, PRECIPITATION RATE, AND GALLONS PER MINUTE
- (B) THE LOCATION OF THE EMERGENCY IRRIGATION SYSTEM SHUT-OFF VALVE. A LAMINATED COPY OF THE WATER BUDGET SHALL BE PERMANENTLY INSTALLED INSIDE THE IRRIGATION CONTROLLER DOOR.

4. THE IRRIGATION INSTALLER SHALL PROVIDE A REPORT TO THE CITY ON A FORM PROVIDED BY THE AUSTIN WATER UTILITY DEPARTMENT CERTIFYING COMPLIANCE WITH SUBSECTION 1 WHEN THE FINAL PLUMBING INSPECTION IS PERFORMED BY THE CITY.

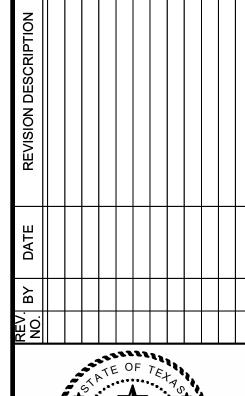
IRRIGATION WILL COMPLY WITH CITY CODE CHAPTER 6-4, ARTICLE 2, DIVISION 2 REGARDING THE CITY'S WATER CONSERVATION RESTRICTION.

APPENDIX P-6: REMEDIAL TREE CARE NOTES AERATION AND SUPPLEMENTAL NUTRIENT REQUIREMENTS FOR TREES WITHIN CONSTRUCTION ZONES

AS A COMPONENT OF AN EFFECTIVE REMEDIAL TREE CARE PROGRAM PER ENVIRONMENTAL CRITERIA MANUAL SECTION 3.5.4, PRESERVED TREES WITHIN THE LIMITS OF CONSTRUCTION MAY REQUIRE SOIL AERATION AND SUPPLEMENTAL NUTRIENTS. SOIL AND/OR FOLIAR ANALYSIS SHOULD BE USED TO DETERMINE THE NEED FOR SUPPLEMENTAL NUTRIENTS. THE CITY ARBORIST MAY REQUIRE THESE ANALYSES AS PART OF A COMPREHENSIVE TREE CARE PLAN. SOIL PH SHALL BE CONSIDERED WHEN DETERMINING THE FERTILIZATION COMPOSITION AS SOIL PH INFLUENCES THE TREE'S ABILITY TO UPTAKE NUTRIENTS FROM THE SOIL. IF ANALYSES INDICATE THE NEED FOR SUPPLEMENTAL NUTRIENTS, THEN HUMATE/NUTRIENT SOLUTIONS WITH MYCORRHIZAE COMPONENTS ARE HIGHLY RECOMMENDED. IN ADDITION, SOIL ANALYSIS MAY BE NEEDED TO DETERMINE IF ORGANIC MATERIAL OR BENEFICIAL MICROORGANISMS ARE NEEDED TO IMPROVE SOIL HEALTH. MATERIALS AND METHODS ARE TO BE APPROVED BY THE CITY ARBORIST (512-974-2755) PRIOR TO APPLICATION. THE OWNER OR GENERAL CONTRACTOR SHALL SELECT A FERTILIZATION CONTRACTOR AND ENSURE COORDINATION WITH THE CITY ARBORIST.

PRE-CONSTRUCTION TREATMENT SHOULD BE APPLIED IN THE APPROPRIATE SEASON, IDEALLY THE SEASON PRECEDING THE PROPOSED CONSTRUCTION. MINIMALLY, AREAS TO BE TREATED INCLUDE THE ENTIRE CRITICAL ROOT ZONE OF TREES AS DEPICTED ON THE CITY APPROVED PLANS. TREATMENT SHOULD INCLUDE, BUT NOT BE LIMITED TO, FERTILIZATION, SOIL TREATMENT, MULCHING, AND PROPER PRUNING.

POST-CONSTRUCTION TREATMENT SHOULD OCCUR DURING FINAL REVEGETATION OR AS DETERMINED BY A QUALIFIED ARBORIST AFTER CONSTRUCTION. CONSTRUCTION ACTIVITIES OFTEN RESULT IN A REDUCTION IN SOIL MACRO AND MICRO PORES AND AN INCREASE IN SOIL BULK DENSITY. TO AMELIORATE THE DEGRADED SOIL CONDITIONS, AERATION VIA WATER AND/OR AIR INJECTED INTO THE SOIL IS NEEDED OR BY OTHER METHODS AS APPROVED BY THE CITY ARBORIST. THE PROPOSED NUTRIENT MIX SPECIFICATIONS AND SOIL AND/OR FOLIAR ANALYSIS RESULTS NEED TO BE PROVIDED TO AND APPROVED BY THE CITY ARBORIST PRIOR TO APPLICATION (FAX # 512-974-3010 OR CITYARBORIST@AUSTINTEXAS.GOV). CONSTRUCTION WHICH WILL BE COMPLETED IN LESS THAN 90 DAYS MAY USE MATERIALS AT ½ RECOMMENDED RATES. ALTERNATIVE ORGANIC FERTILIZER MATERIALS ARE ACCEPTABLE WHEN APPROVED BY THE CITY ARBORIST. WITHIN 7 DAYS AFTER FERTILIZATION IS PERFORMED, THE CONTRACTOR SHALL PROVIDE DOCUMENTATION OF THE WORK PERFORMED TO THE CITY ARBORIST, DEVELOPMENT SERVICES DEPARTMENT. P.O. BOX 1088, AUSTIN, TX 78767. THIS NOTE SHOULD BE REFERENCED AS ITEM #1 IN THE SEQUENCE OF CONSTRUCTION.



RUBÉN LÓPEZ, JR

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DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
VIOLET CROWN TRAIL - NORTH
PHASE 2A

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NAME	DATE
QMD	12/2015
IMV	12/2015
IMV	12/2015
ESD	12/2015
RL	12/2015
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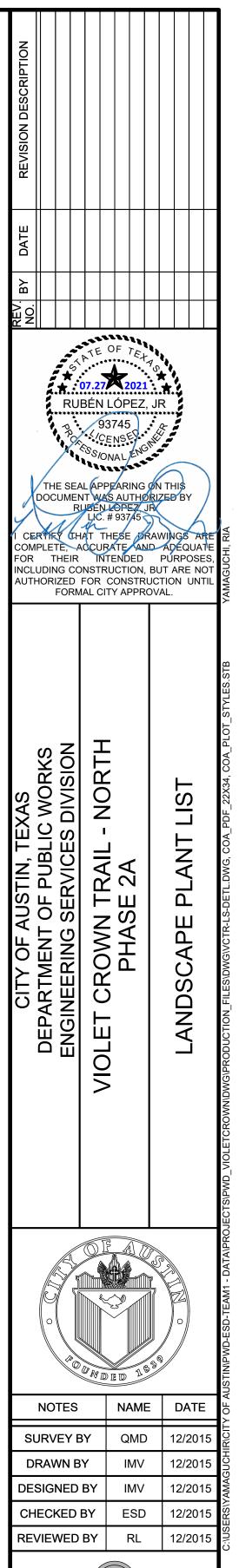
SHRUB / PERENNIAL / GRASSES LIST						
PLANT SYMBOL	COMMON NAME	GENUS/SPECIES	COUNT	SIZE	SPACING	
	AGARITA	Mahonia trifoliata	37	3 GAL	3' O.C.	
ZW.	BASKET GRASS	Nolina texana	43	3 GAL	2' O.C.	
3. · · · ·	DWARF YAUPON HOLLY	llex vomitoria 'Nana'	29	3 GAL	4' O.C.	
100 00 00 00 00 00 00 00 00 00 00 00 00	LANTANA	Lantana urticoides	16	1 GAL	3' O.C.	
0	ROCK ROSE	Pavonia lasiopetela	23	1 GAL	1' - 6" O.C.	
	SPINELESS PRICKLY PEAR	Opuntia cacanapa 'Ellisiana'	26	3 GAL	2' - 6" O.C.	
\bigcirc	SIDE OATS GRAMMA	Bouteloua curtipendula	48	1 GAL	1' - 6" O.C.	
	SWITCH GRASS	Panicum virgatum	63	1 GAL	1' - 6" O.C.	
	TURK'S CAP	Malvaviscus drummondii 'Big Momma'	70	1 GAL	3' O.C.	
AND THE	TALL GOLDENROD	Solidago altissima	27	1 GAL	2' - 6" O.C.	

		TREE LIST				
PLANT SYMBOL	COMMON NAME	GENUS/SPECIES	COUNT	SIZE	SPACING	COMMENTS
	CEDAR ELM	Ulmus crassifolia	33	3" / 4"	MIN 23' O.C.	SINGLE TRUNK
	CHINQUAPIN OAK	Quercus muhlenbergii	18	3" / 4"	MIN 30' O.C.	SINGLE TRUNK
	EASTERN RED CEDAR	Juniperus virginiana	18	2" OR GAL EQUIVALENT	MIN 20' O.C.	SINGLE TRUNK
£(+)}	GOLDENBALL LEADTREE	Leucaena retusa	34	2" OR GAL EQUIVALENT	MIN 13' O.C.	MULTI TRUNK
•	HONEY MESQUITE	Prosopis chilensis	3	2" OR GAL EQUIVALENT	MIN 30' O.C.	MULTI TRUNK
	KIDNEYWOOD	Eysenhardtia texana	17	10 GAL	MIN 7' O.C.	MULTI TRUNK
	LIVE OAK	Quercus virginiana	23	3" / 4"	MIN 38' O.C.	SINGLE TRUNK
	MONTERREY OAK	Quercus polymorpha	7	3" / 4"	MIN 36' O.C. OR AS SHOWN	SINGLE TRUNK
Juli day	YAUPON HOLLY	llex vomitoria 'Pride of Houston'	13	2" OR GAL EQUIVALENT	MIN 14' O.C. OR AS SHOWN	MULTI TRUNK
	LIMESTONE BOULDERS		48	MISCELLANEOUS	SEE NOTE BELOW	SEE NOTE BELO

PLANT KEY				
ABBREVIATION	COMMON NAME			
AG	AGARITA			
BG	BASKET GRASS			
LA	LANTANA			
RR	ROCK ROSE			
PP	SPINELESS PRICKLY PEAR			
SO	SIDE OATS GRAMMA			
SG	SWITCH GRASS			
TC	TURK'S CAP			
GR	TALL GOLDENROD			

PLA	PLANT KEY			
ABBREVIATION	COMMON NAME			
CE	CEDAR ELM			
СО	CHINQUAPIN OAK			
DY	DWARF YAUPON HOLLY			
ER	EASTERN RED CEDAR			
GL	GOLDBALL LEADTREE			
НМ	HONEY MESQUITE			
KW	KIDNEYWOOD			
LO	LIVE OAK			
МО	MONTERREY OAK			
YH	YAUPON HOLLY			

NOTE: BOULDERS TO BE SOURCED ON SITE. ACQUISITION AND PLACEMENT TO BE COORDINATED WITH CITY OF SUNSET VALLEY ENVIRONMENTAL SERVICES MANAGER CAROLYN MEREDITH AT 512-891-9103 AND CITY OF AUSTIN LANDSCAPE ARCHITECT OR PROJECT LANDSCAPE REPRESENTATIVE AT 512-974-7006.



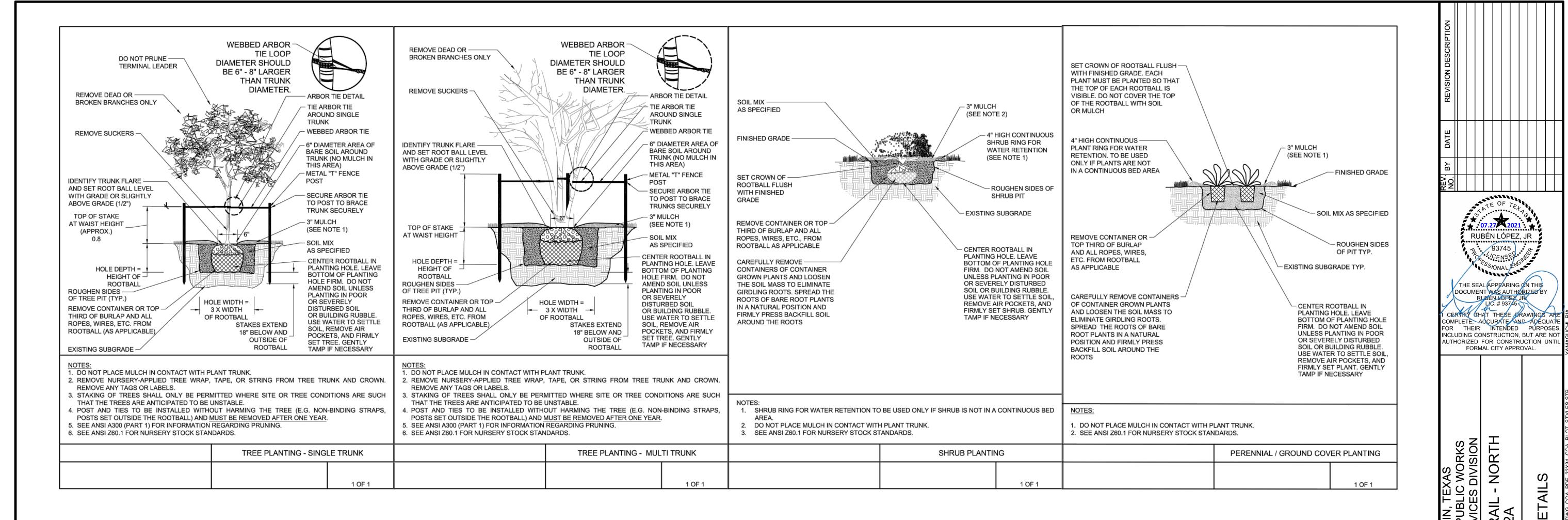
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SURVEY BY	QMD	12/2015	XHO GII IO IO WAN WOOD
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DESIGNED BY	IMV	12/2015	
CHECKED BY	ESD	12/2015	
REVIEWED BY	RL	12/2015	



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RUBÉN LÓPEZ, JR

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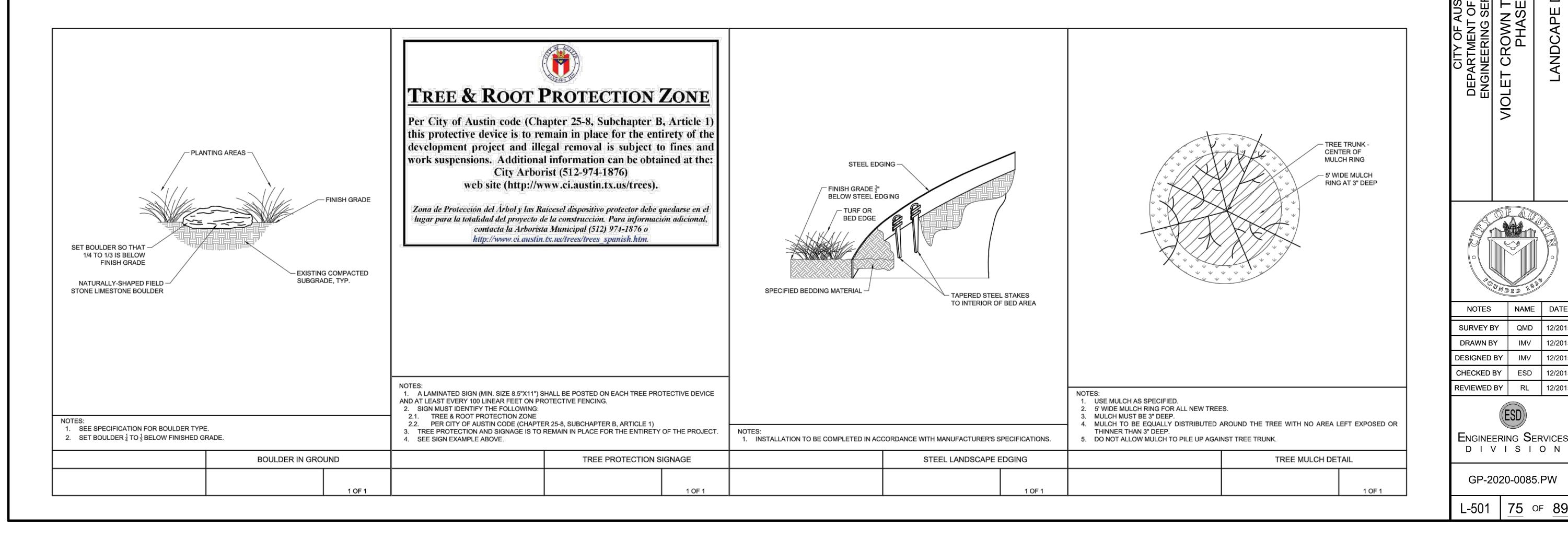
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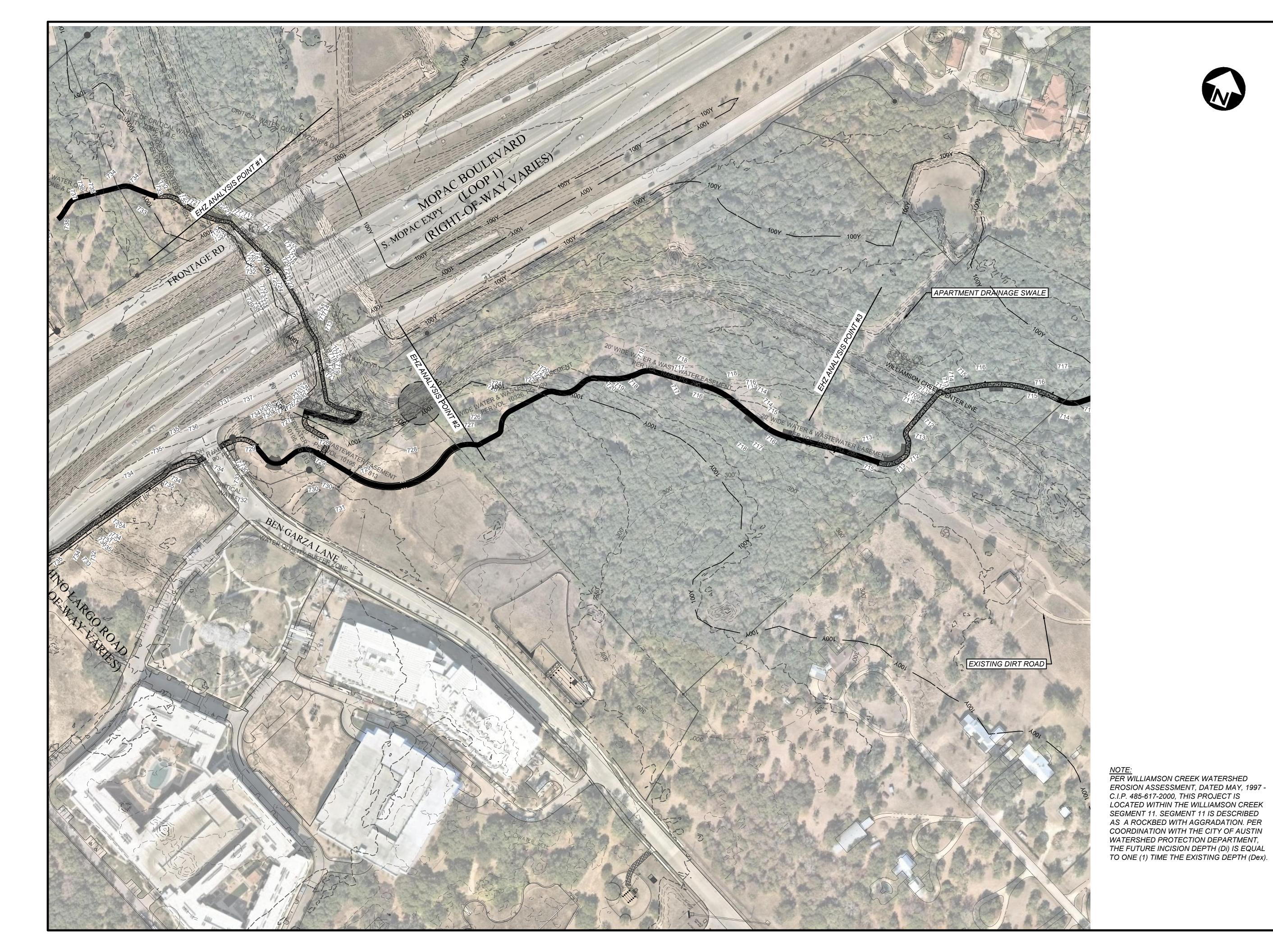
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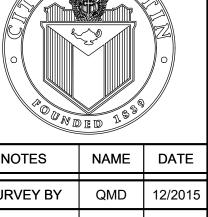






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LIC. # 93745

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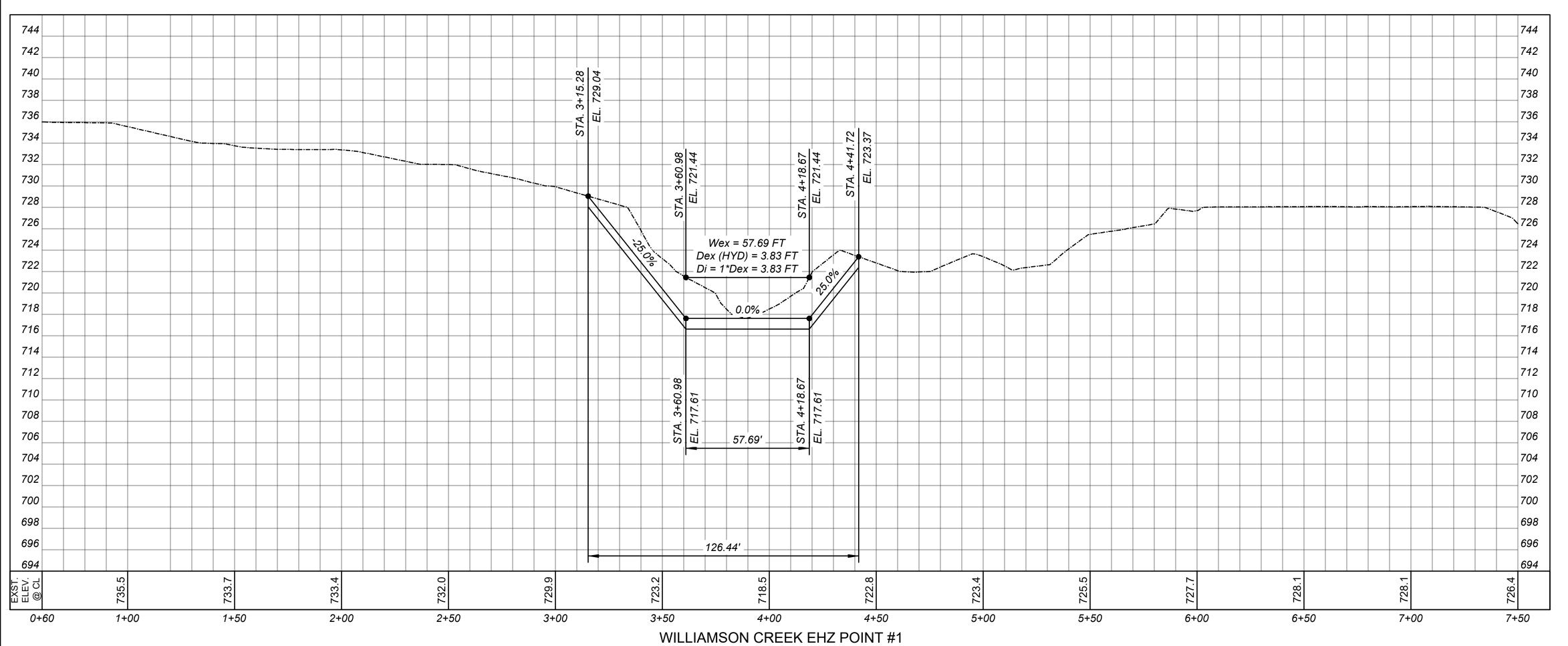


NOTES	NAME	DATE
SURVEY BY	QMD	12/2015
DRAWN BY	IMV	12/2015
DESIGNED BY	IMV	12/2015
CHECKED BY	ESD	12/2015
REVIEWED BY	RL	12/2015

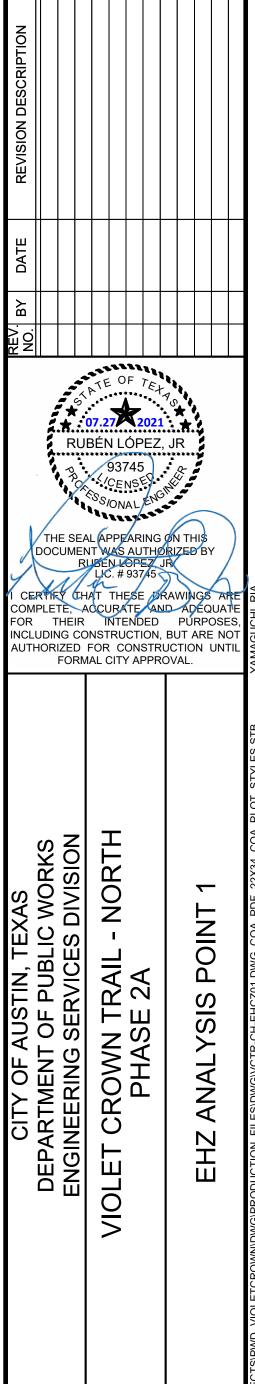
HORIZONTAL SCALE IN FEET

GP-2020-0085.PW





1. PER WILLIAMSON CREEK WATERSHED EROSION ASSESSMENT, DATED MAY, 1997 -C.I.P. 485-617-2000, THIS PROJECT IS LOCATED WITHIN THE WILLIAMSON CREEK SEGMENT 11. SEGMENT 11 IS DESCRIBED AS A ROCKBED WITH AGGRADATION. PER COORDINATION WITH THE CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT, THE FUTURE INCISION DEPTH (Di) IS EQUAL TO ONE (1) TIME THE EXISTING DEPTH (Dex). 2. ONE (1) FOOT CONTOUR TOPOGRAPHY IS BASED ON CITY OF AUSTIN G.I.S. 2012 AERIAL INFORMATION.





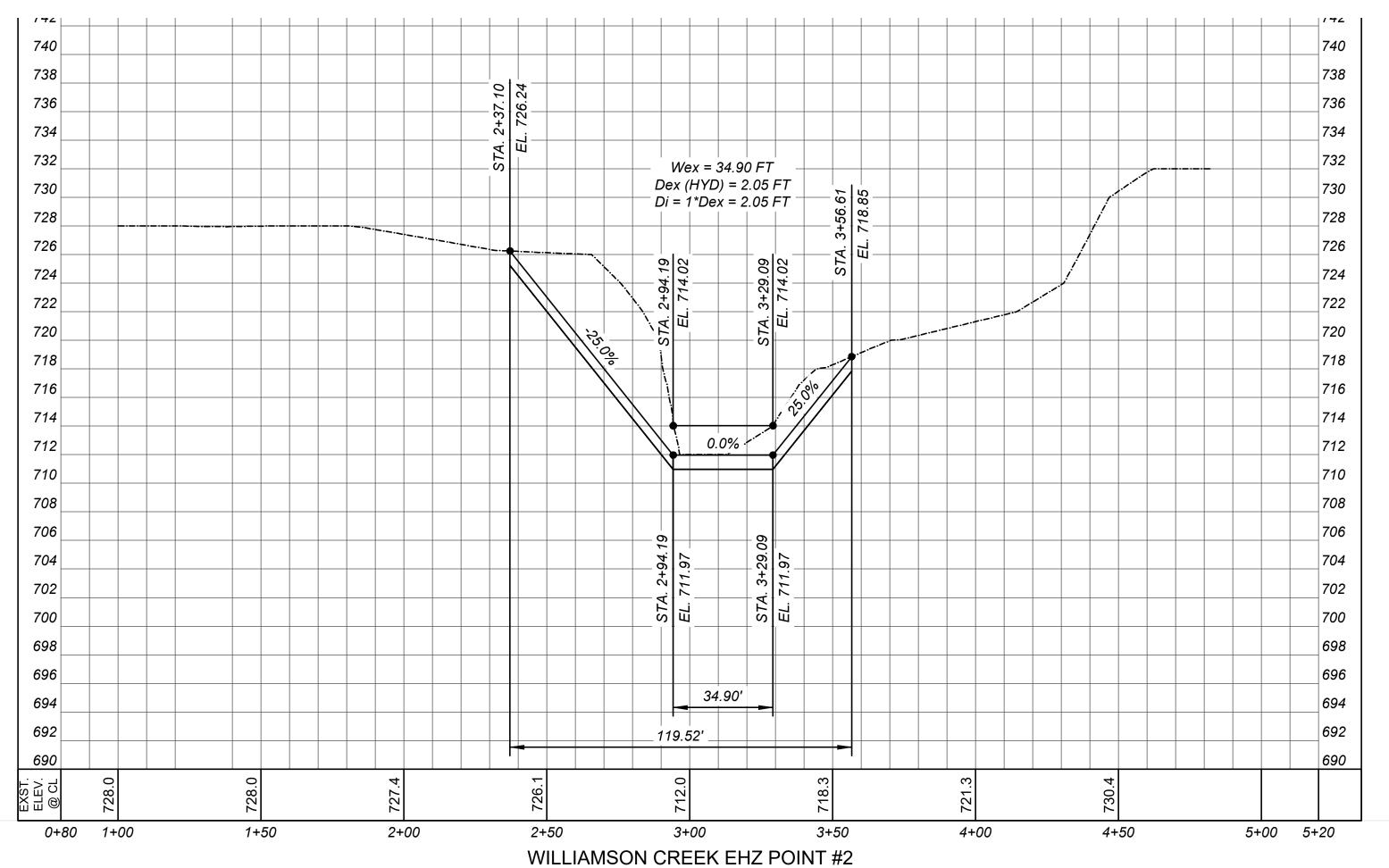
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HORIZONTAL	SCALE IN	FEET	
0	6	12	

VERTICAL SCALE IN FEET

GP-2020-0085.PW

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NOTE: 1. PER WILLIAMSON CREEK WATERSHED EROSION ASSESSMENT, DATED MAY, 1997 -C.I.P. 485-617-2000, THIS PROJECT IS LOCATED WITHIN THE WILLIAMSON CREEK SEGMENT 11. SEGMENT 11 IS DESCRIBED AS A ROCKBED WITH AGGRADATION. PER COORDINATION WITH THE CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT, THE FUTURE INCISION DEPTH (Di) IS EQUAL TO ONE (1) TIME THE EXISTING DEPTH (Dex). 2. ONE (1) FOOT CONTOUR TOPOGRAPHY IS BASED ON CITY OF AUSTIN G.I.S. 2012 AERIAL INFORMATION.

BY DATE REVISION DESCRIPTION											
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THE SEAL APPEARING ON THIS
DOCUMENT WAS AUTHORIZED BY
RUSEN LOPEZ JR
LUC. # 93745

I CERTIFY THAT THESE PRAWINGS ARE
COMPLETE, ACCURATE AND ADEQUATE
FOR THEIR INTENDED PURPOSES,
INCLUDING CONSTRUCTION, BUT ARE NOT
AUTHORIZED FOR CONSTRUCTION UNTIL
FORMAL CITY APPROVAL.

DEPA ENGIN VIOLET



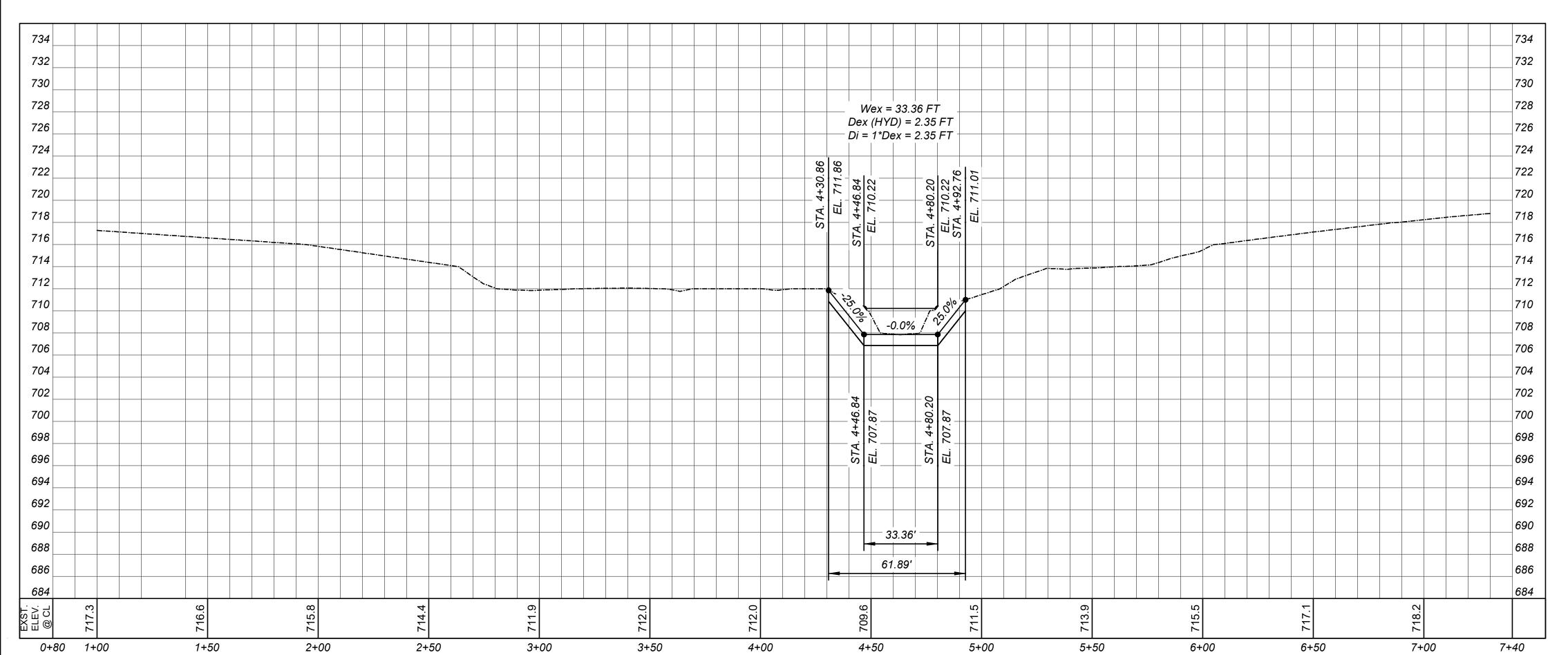
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DESIGNED BY	IMV	12/2015	
CHECKED BY	ESD	12/2015	
REVIEWED BY	RL	12/2015	
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HORIZONTAL SCALE IN FEET VERTICAL SCALE IN FEET

GP-2020-0085.PW

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WILLIAMSON CREEK EHZ POINT #3

<u>NOTE:</u> 1. PER WILLIAMSON CREEK WATERSHED EROSION ASSESSMENT, DATED MAY, 1997 -C.I.P. 485-617-2000, THIS PROJECT IS LOCATED WITHIN THE WILLIAMSON CREEK SEGMENT 11. SEGMENT 11 IS DESCRIBED AS A ROCKBED WITH AGGRADATION. PER COORDINATION WITH THE CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT, THE FUTURE INCISION DEPTH (Di) IS EQUAL TO ONE (1) TIME THE EXISTING DEPTH (Dex). 2. ONE (1) FOOT CONTOUR TOPOGRAPHY IS BASED ON CITY OF AUSTIN G.I.S. 2012 AERIAL INFORMATION.

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY RUSEN LOPEZ JR LIC. # 93745

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DESIGNED BY	IMV	12/2015
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REVIEWED BY	RL	12/2015
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HORIZONTAL SCALE IN FEET VERTICAL SCALE IN FEET

GP-2020-0085.PW

S-104 79 OF 89

VIOLET CROWN TRAIL NORTH PHASE 2A

requirements.

GENERAL NOTES

- 1. Reserved.
- 2. Vehicular access larger than the design live load shall be limited by permanent physical means.
- 3. Prior to construction the contractor shall verify all elevations through the project engineer.
- 4. Reserved.
- 5. All Materials Shall Be Installed By Contractor.

DESIGN DATA

1. Boardwalk shall be designed in accordance with the AASHTO LRFD bridge design specifications and the LRFD guide specification for the design of pedestrian

Design Live Load: Pedestrian Loading - 90 psf Uniform Vehicular Loading - H5 Design Truck (10,000 Lb. Vehicle)

- 2. Piers shall be designed for lateral earth pressure, live load surcharge and Allowable bearing pressure for piers penetrating a minimum of 12 inches
- below limestone surface: 10,000 psf. (Contractor To Verify)
- 3. All geotechnical recommendations contained in the report of subsurface investigation shall be followed. Report "Geotechnical Engineering Study For Violet Crown Trail" was dated January 10, 2020 and produced by Raba
- 4 Reserved.
- 5. Concrete Design In Accordance With ACI 318-19 Specifications.

MATERIALS

- 1. All bolts, nuts, washers, and hardware shall be hot dipped galvanized after fabrication in accordance with ASTM A153.
- 2. Cast-in-place concrete shall have a 28-day concrete compressive strength of 4000 psi.
- 3. Cast-in-place concrete shall meet Class S concrete mix design specifications and material requirements of the city of Austin, TX per Item No. 403S in the City of Austin Standard Specifications Manual.
- 4. All reinforcing shall be Grade 60 conforming to **ASTM A615**.

6

ANTICIPATED MATERIALS TESTING AND INSPECTION FOR PREFABRICATED BRIDGE CONSTRUCTION

SYSTEM OR MATERIAL		INSPECTION		
STSTEIVI ON IVIATERIAL	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY	PERIODIC
SOILS			CONTINUOUS	PERIODIC
VERIFY MATERIAL BELOW FOUNDATION IS ADEQUATE TO ACHIEVE DESIGN BEARING CAPACITY, FREE OF LOOSE, DELETERIOUS OR FOREIGN MATERIAL				X (FOUNDATION EXCAVATION COMPLETE)
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH, PROPER SIZE AND MATERIAL	1705.6 & 3304 & APPENDIX J	GEOTECHNICAL REPORT		X (FOUNDATION EXCAVATION COMPLETE)
PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY SITE IS PROPERLY PREPARED				
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIAL				X (DURING TO PLACEMENT OF FILL)
STEEL				
STEEL PICKET RAILING, ON-SITE WELDING OF MEMBERS	1705.2.1			X (AFTER INSTALLATION)
CONCRETE				
CLIP ANGLE ANCHORAGE		ACI 318: 17.8.2		X (BEFORE INSTALLATION)
VERIFY USE OF REQUIRED DESIGN MIX	1904.1, 1904.2 1908.2, 1908.3	ACI 318: Ch 19, 26.4.3, 26.4.4		X (PRIOR TO CONCRETE PLACEMENT)
FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPRATURE OF THE CONCRETE	1908.10	ASTM C172 ASTM C31 ACI 318: 26.4, 26.12		X (PRIOR TO CONCRETE PLACEMENT)
INSPECT ERECTION OF PRECAST CONCRETE MEMBERS		ACI 318: CH26.8		X (DURING AND UPON COMPLETION)

PRECAST CONCRETE BOARDWALK SHEET 1 OF 6

	5	TE OF TELD	These drawings are included for reference	
4	4		purposes and were provided by PermaTrak	
_			North America. Final engineered drawings	
_ ;	3	KEVIN SWEAT	will be submitted by Prefab Bridge	
	2	92023 · · · · / CENSE · · · · · · · · · · · · · · · · · · ·	Manufacturer per SS1400-PCBW. Please	
	1	ESSIONAL ENGINE	reference SS1400-PCBW for submittal	

BY:

DESCRIPTION

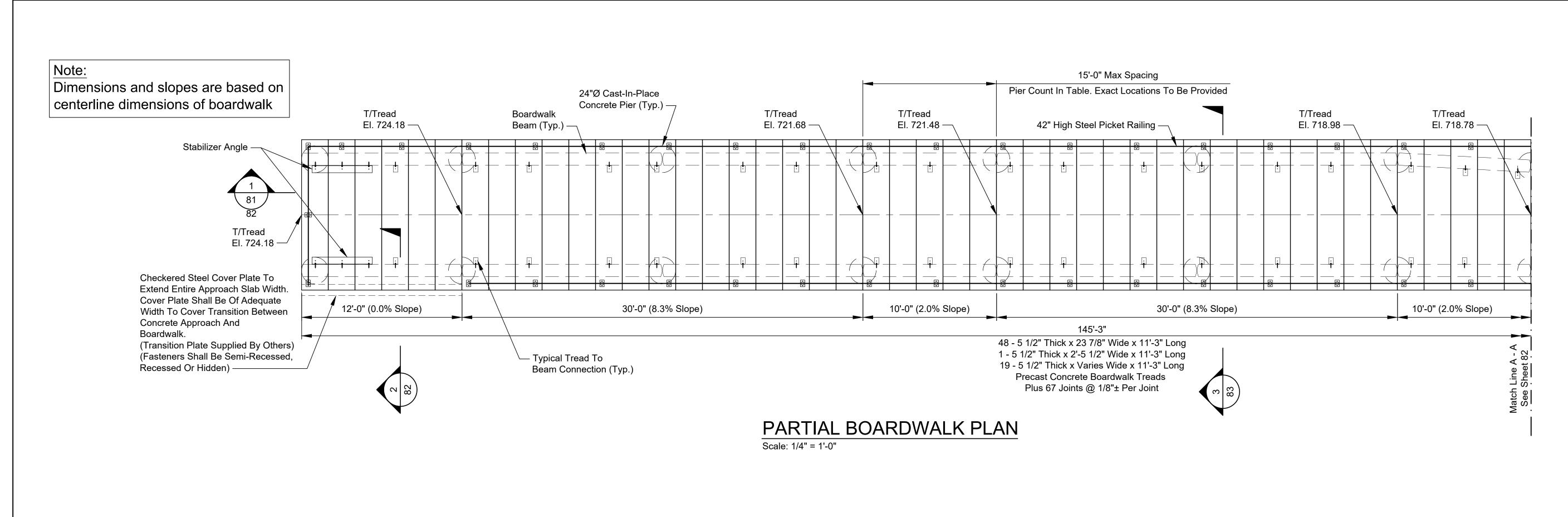
VIOLET CROWN TRAIL NORTH PHASE 2A

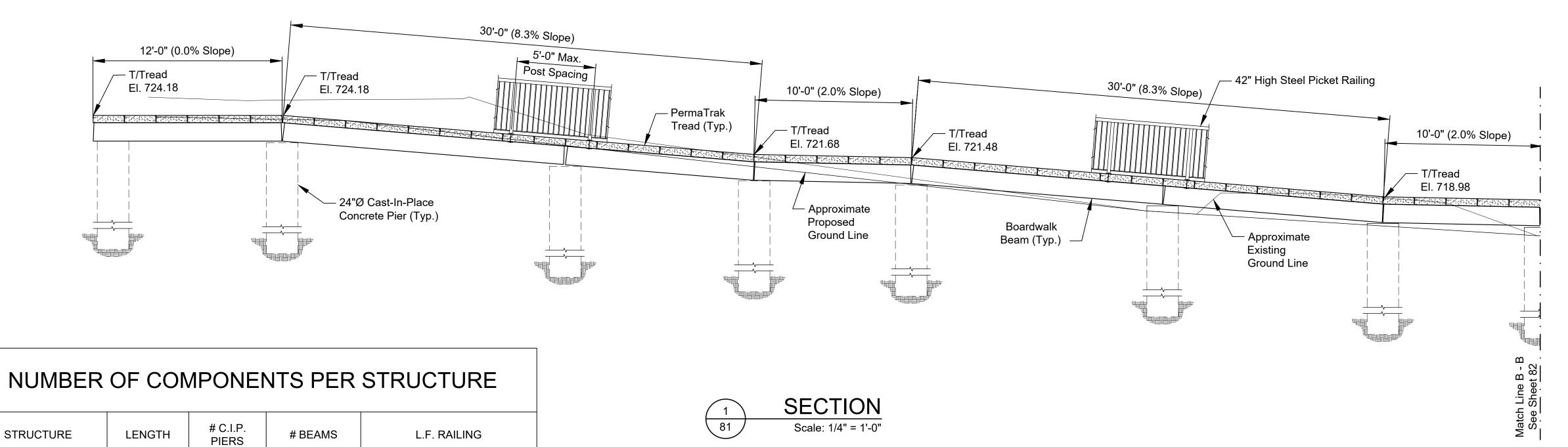
AUSTIN, TEXAS

PROJECT TITLE:

Patented Product: U.S. Patent #5,906,084 #8,302,362 #8,522,505 #8,839,588 #9,096,975

SHEET NO.





6				
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4				
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NO.	DATE	DESCRIPTION	BY:	
			•	

24

22

234'-6"

145'-3"

STRUCTURE

BOARDWALK #1



These drawings are included for reference purposes and were provided by PermaTrak North America. Final engineered drawings will be submitted by Prefab Bridge Manufacturer per SS1400-PCBW. Please reference SS1400-PCBW for submittal requirements.

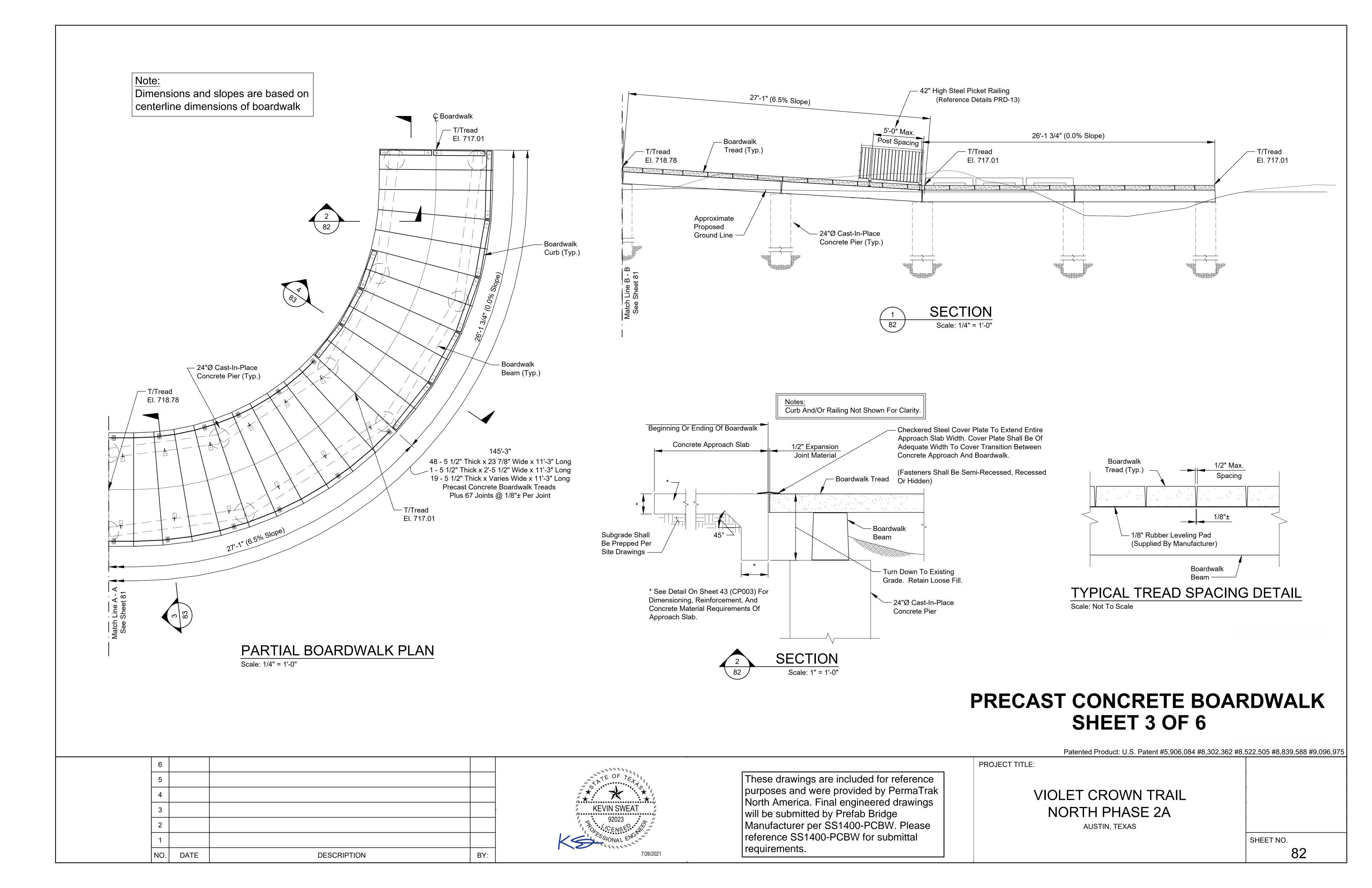
PROJECT TITLE: VIOLET CROWN TRAIL NORTH PHASE 2A AUSTIN, TEXAS SHEET NO.

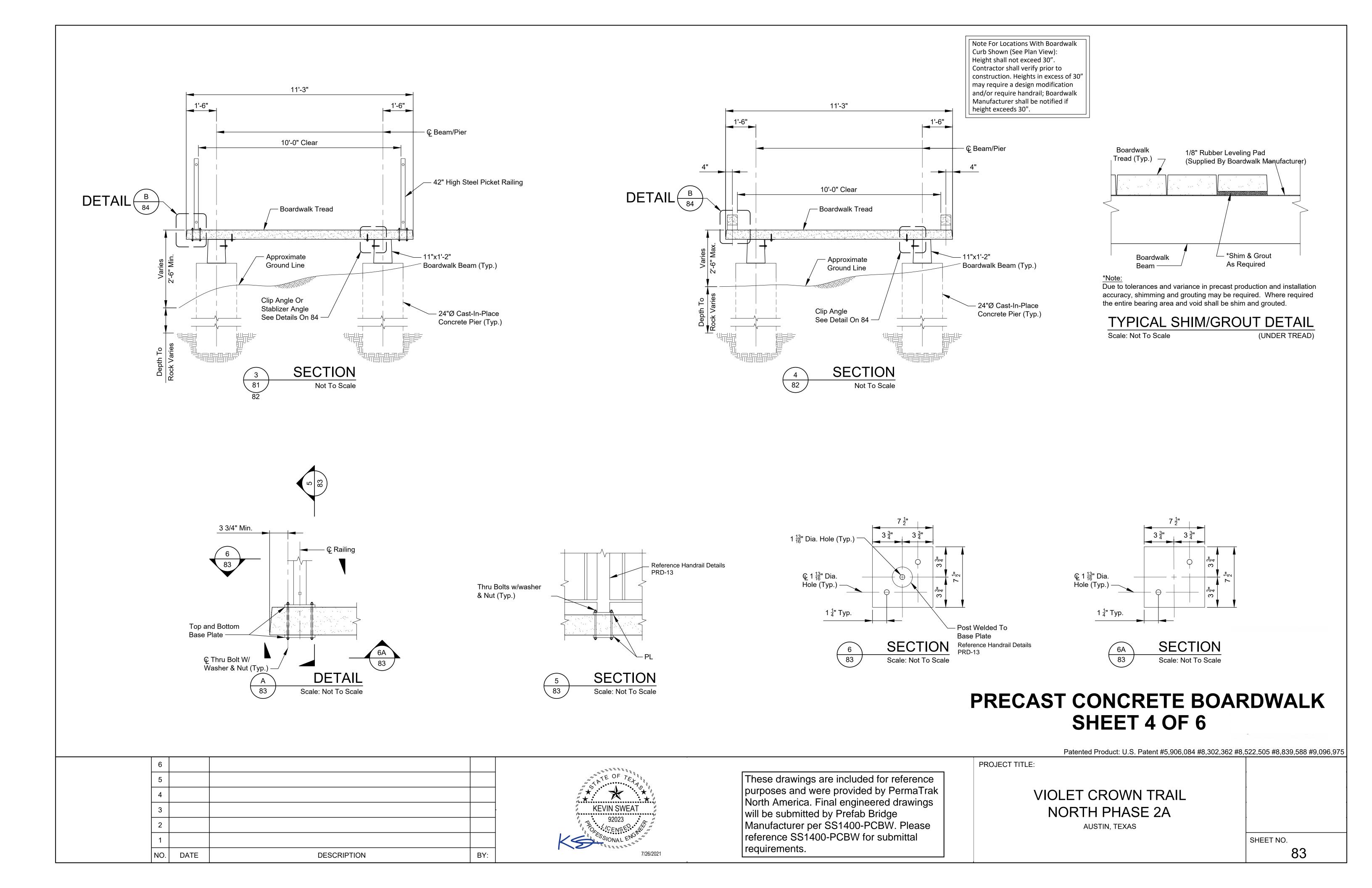
Patented Product: U.S. Patent #5,906,084 #8,302,362 #8,522,505 #8,839,588 #9,096,975

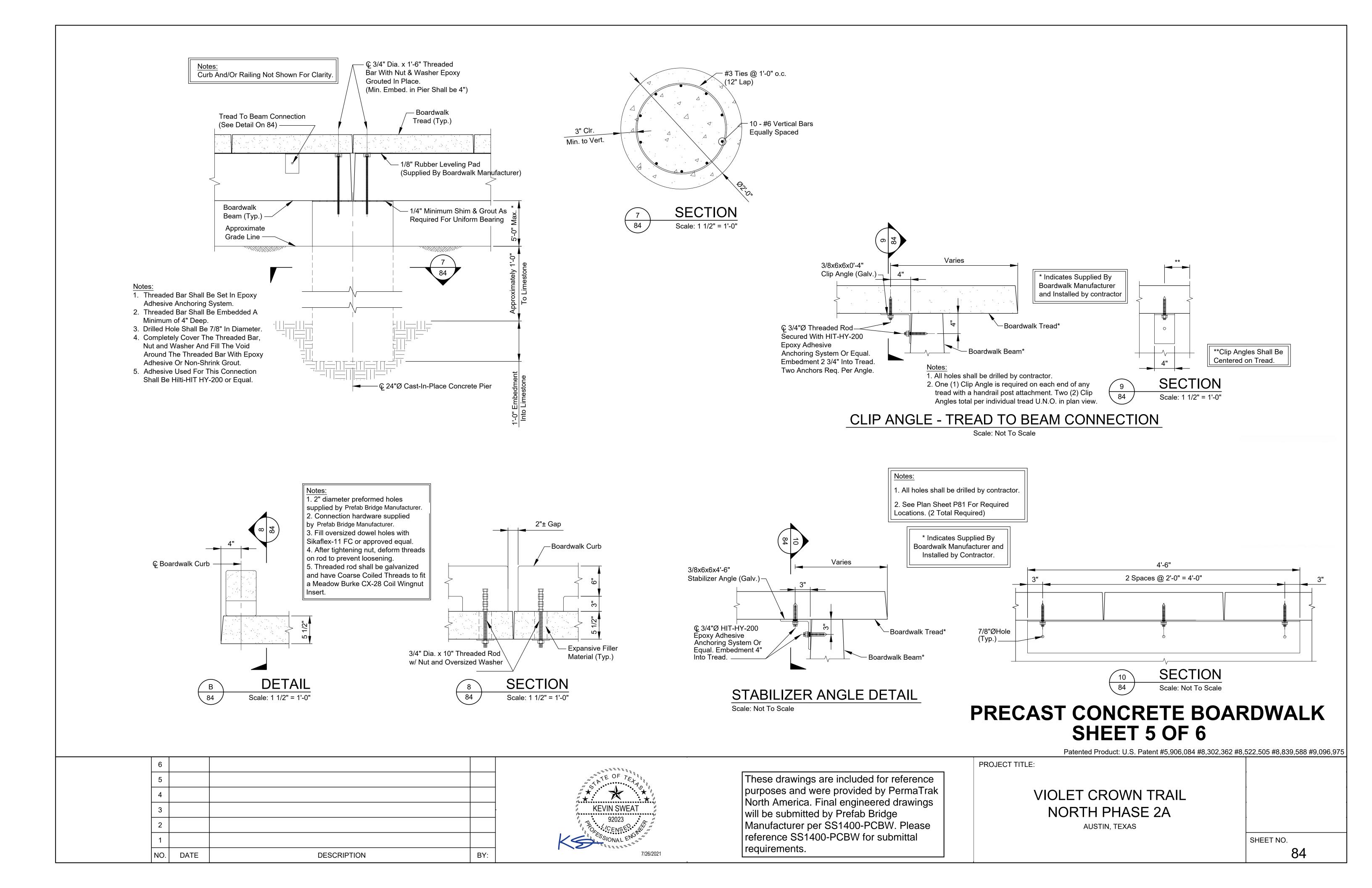
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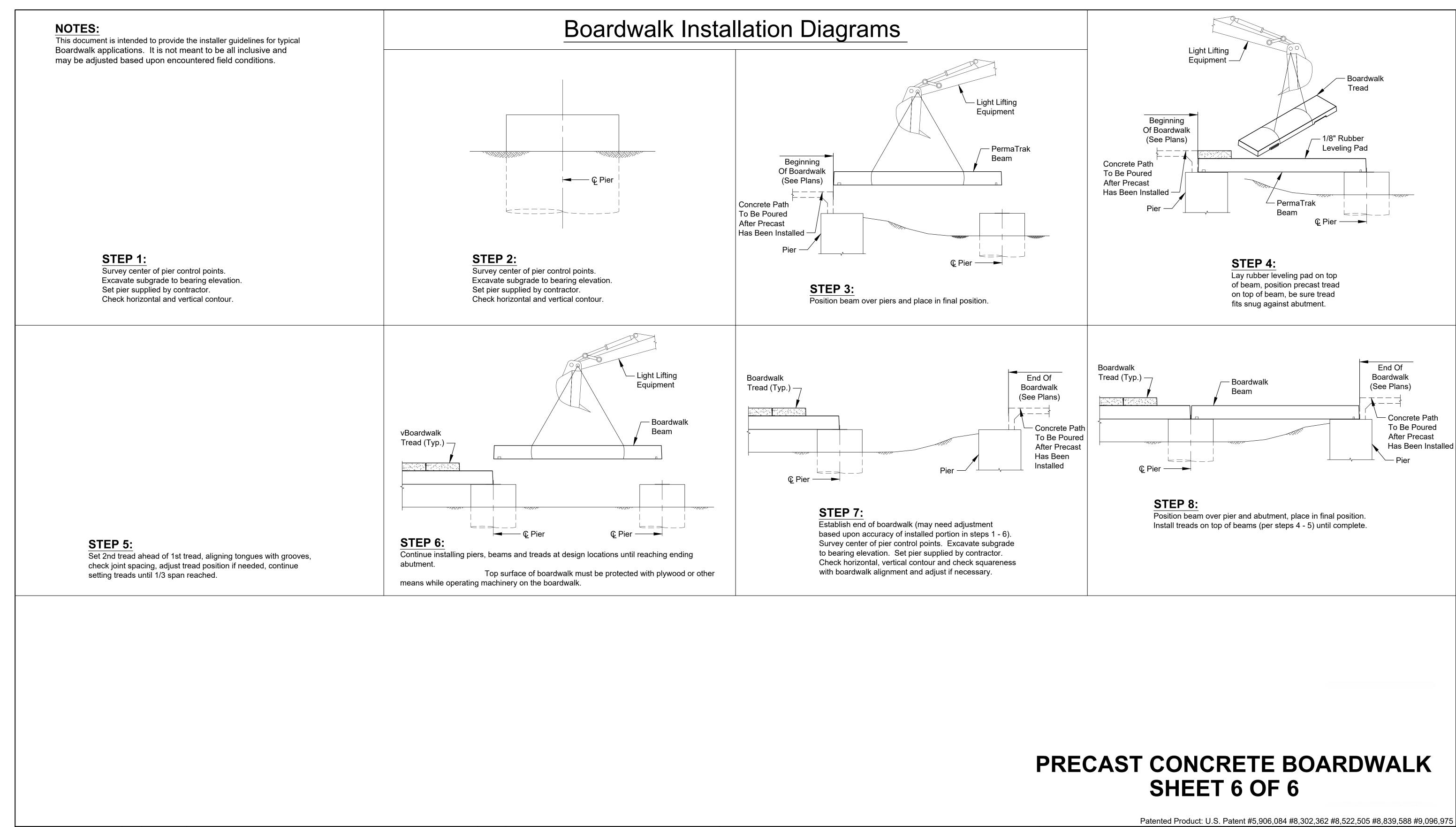
PRECAST CONCRETE BOARDWALK

SHEET 2 OF 6











These drawings are included for reference purposes and were provided by PermaTrak North America. Final engineered drawings will be submitted by Prefab Bridge Manufacturer per SS1400-PCBW. Please reference SS1400-PCBW for submittal requirements.

VIOLET CROWN TRAIL
NORTH PHASE 2A
AUSTIN, TEXAS

SHEET NO.

	ENTION-CLEAN WATER ACT SECTIO	N 402
TPDES TXR 150000: Stormwate required for projects with 1 or	er Discharge Permit or Construction more acres disturbed soil. Projecterosion and sedimentation in acco	General Permit ts with any
	receive discharges from this proje prior to construction activities.	ect.
1. City of Austin		
2. City of Sunset Valley		
No Action Required	Required Action	
Action No.		
	n by controlling erosion and sedime mit TXR 150000	ntation in
required by the Engineer. 3. Post Construction Site Notice the site, accessible to the 4. When Contractor project specifications.	revise when necessary to control pose (CSN) with SW3P information on public and TCEQ, EPA or other insectific locations (PSL's) increase dissubmit NOI to TCEQ and the Engine	or near pectors. turbed soil
ATER ACT SECTIONS 401 AND USACE Permit required for file	/ATERBODIES AND WETLANDS CLE 404 Iling, dredging, excavating or other streams, wetlands or wet areas.	
The Contractor must adhere the following permit(s):	to all of the terms and conditions	associated with
No Permit Required		
Nationwide Permit 14 − F wetlands affected)	PCN not Required (less than 1/10th	acre waters or
Nationwide Permit 14 — F	PCN Required (1/10 to <1/2 acre, 1	1/3 in tidal waters)
☐ Individual 404 Permit Req	uired	
Other Nationwide Permit F	Required: NWP#	
·	of the US permit applies to, locati Practices planned to control erosion	· -
1. WILLIAMSON CREEK LOW V	WATER CROSSING — STA. 33+43.29	- STA. 35+47.35
to be performed in the waters permit can be found on the E		5
Best Management Practice		
Erosion	Sedimentation	Post-Construction TSS
	∑ Silt Fence	Vegetative Filter Strips
Temporary Vegetation		
Blankets/Matting	Rock Berm	Retention/Irrigation Systems
	Rock Berm Triangular Filter Dike	Retention/Irrigation Systems Extended Detention Basin
	Rock Berm Triangular Filter Dike Sand Bag Berm	Retention/Irrigation Systems Extended Detention Basin Constructed Wetlands
Blankets/Matting Mulch Sodding Interceptor Swale	Rock Berm Triangular Filter Dike Sand Bag Berm Straw Bale Dike	Retention/Irrigation Systems Extended Detention Basin Constructed Wetlands Wet Basin
	Rock Berm Triangular Filter Dike Sand Bag Berm	Retention/Irrigation Systems Extended Detention Basin Constructed Wetlands

Compost Filter Berm and Socks

Stone Outlet Sediment Traps

Sediment Basins

Vegetation Lined Ditches

Sand Filter Systems

Grassy Swales

III. CULTURAL RESOURCES

Refer to TxDOT Standard Specifications in the event historical issues or archeological artifacts are found during construction. Upon discovery of archeological artifacts (bones, burnt rock, flint, pottery, etc.) cease work in the immediate area and contact the Engineer immediately.

No Action Required

Required Action

IV. VEGETATION RESOURCES

Preserve native vegetation to the extent practical. Contractor must adhere to Construction Specification Requirements Specs 162, 164, 192, 193, 506, 730, 751, 752 in order to comply with requirements for invasive species, beneficial landscaping, and tree/brush removal commitments.

No Action Required

Required Action

Action No.

1. ALL DISTURBED AREAS WILL BE RE-VEGETATED ACCORDING TO TXDOT'S STANDARD PRACTICES FOR URBAN AREAS AND THE TCEQ CONSTRUCTION GENERAL PERMIT (CGP) TO THE EXTENT PRACTICABLE, IN COMPLIANCE WITH EXECUTIVE ORDER 13112 ON INVASIVE SPECIES AND THE EXECUTIVE MEMORANDUM ON BENEFICIAL LANDSCAPING. RE-VEGETATION EFFORTS WOULD PROVIDE APPROPRIATE AND SUSTAINABLE COVER TO PREVENT EROSION AND SILTATION.

V. FEDERAL LISTED, PROPOSED THREATENED, ENDANGERED SPECIES, CRITICAL HABITAT, STATE LISTED SPECIES, CANDIDATE SPECIES AND MIGRATORY BIRDS.

No Action Required

Required Action

Action No.

- 1. THE CONTRACTOR WILL INVITE TXDOT BIOLOGISTS TO ATTEND THE PRE-CONSTRUCTION MEETING FOR THE PROJECT SO THAT TXDOT CAN PROVIDE SPECIFIC INSTRUCTION ON THE IMPLEMENTATION OF THE GOLDEN CHEEKED WARBLER BMPS.
- 2. IMPLEMENT GOLDEN CHEEKED WARBLER BMPS TO COMPLY WITH THE PROGRAMMATIC AGREEMENT BETWEEN TXDOT AND USFWS, AS OUTLINED UNDER ITEM VII (OTHER ENVIRONMENTAL ISSUES).
- 3. IMPLEMENT BMPS FOR THE FOLLOWING, AS OUTLINED UNDER ITEM VII (OTHER ENVIRONMENTAL ISSUES).

PLAINS SPOTTED SKUNK BMP, AMPHIBIAN AND AQUATIC REPTILE BMPS, BIRD BMPS, TERRESTRIAL REPTILE BMPS, BAT BMPS, VEGETATION BMPS, AND INVASIVE SPECIES BMPS. IMPLEMENT BMPS AS OUTLINED IN THE PREP ROW PRUNING DETAIL SHEET FOR TREE PRESERVATION AND OAK WILT PREVENTION.

4. MIGRATORY BIRDS AND BATS MAY BE NESTING WITHIN THE PROJECT LIMITS AND CONCENTRATED ON ROADWAY STRUCTURES SUCH AS BRIDGES AND CULVERTS. REMOVE ALL OLD AND UNOCCUPIED MIGRATORY BIRD NESTS FROM ANY STRUCTURES, TREES, ETC. BETWEEN SEPTEMBER 16 AND FEBRUARY 28. PREVENT MIGRATORY BIRDS FROM RE-NESTING BETWEEN MARCH 1 AND SEPTEMBER 15. ALL METHODS USED FOR THE REMOVAL OF OLD NESTING AREAS AND THE PREVENTION OF RE-NESTING MUST BE SUBMITTED TO TXDOT 30 BUSINESS DAYS PRIOR TO BEGIN WORK. THIS WORK IS SUBSIDIARY.

IF ACTIVE NESTS ARE ENCOUNTERED ON-SITE DURING CONSTRUCTION, ALL CONSTRUCTION ACTIVITY WITHIN 50 FT. OF THE NEST MUST STOP. CONTACT THE ENGINEER TO DETERMINE HOW TO PROCEED.

If any of the listed species are observed, cease work in the immediate area, do not disturb species or habitat and contact the Engineer immediately. The work may not remove active nests from bridges and other structures during nesting season of the birds associated with the nests. If caves or sinkholes are discovered, cease work in the immediate area, and contact the Engineer immediately.

LIST OF ABBREVIATIONS

BMP: Best Management Practice CGP: Construction General Permit DSHS: Texas Department of State Health Services

FHWA: Federal Highway Administration MOA: Memorandum of AgreementMOU:

Memorandum of UnderstandingMS4: Municipal Separate Stormwater Sewer SystemMBTA: Migratory Bird Treaty ActNOT: Notice of TerminationNWP: Nationwide Permit NOI: Notice of Intent

Prevention Plan

PCN: Pre-Construction NotificationPSL: Project Specific LocationTCEQ: Texas Commission on Environmental QualityTPDES: Texas Pollutant Discharge Elimination SystemTPWD: Texas Parks and Wildlife DepartmentTxDOT: Texas Department of TransportationT&E: Threatened and Endangered SpeciesUSACE: U.S. Army Corps of EngineersUSFWS: U.S. Fish and Wildlife

CountermeasureSW3P: Storm Water Pollution

SPCC: Spill Prevention Control and

VI. HAZARDOUS MATERIALS OR CONTAMINATION ISSUES

General (applies to all projects):

Comply with the Hazard Communication Act (the Act) for personnel who will be working with hazardous materials by conducting safety meetings prior to beginning construction and making workers aware of potential hazards in the workplace. Ensure that all workers are provided with personal protective equipment appropriate for any hazardous materials used.

Obtain and keep on—site Material Safety Data Sheets (MSDS) for all hazardous products used on the project, which may include, but are not limited to the following categories: Paints, acids, solvents, asphalt products, chemical additives, fuels and concrete curing compounds or additives. Provide protected storage, off bare ground and covered, for products which may be hazardous. Maintain product labelling as required by the Act.

Maintain an adequate supply of on—site spill response materials, as indicated in the MSDS. In the event of a spill, take actions to mitigate the spill as indicated in the MSDS, in accordance with safe work practices, and contact the District Spill Coordinator immediately. The Contractor shall be responsible for the proper containment and cleanup of all product spills.

Contact the Engineer if any of the following are detected:

- * Dead or distressed vegetation (not identified as normal)
- * Trash piles, drums, canister, barrels, etc.
- * Undesirable smells or odors
- * Evidence of leaching or seepage of substances

Does the project involve any bridge class structure rehabilitation or replacements (bridge class structures not including box culverts)?

If "No", then no further action is required.

If "Yes", then TxDOT is responsible for completing asbestos assessment/inspection.

Are the results of the asbestos inspection positive (is asbestos present)?

No. Yes

If "Yes", then TxDOT must retain a DSHS licensed asbestos consultant to assist with the notification, develop abatement/mitigation procedures, and perform management activities as necessary. The notification form to DSHS must be postmarked at least 15 working days prior to scheduled demolition.

If "No", then TxDOT is still required to notify DSHS 15 working days prior to any scheduled demolition.

In either case, the Contractor is responsible for providing the date(s) for abatement activities and/or demolition with careful coordination between the Engineer and asbestos consultant in order to minimize construction delays and subsequent claims.

Any other evidence indicating possible hazardous materials or contamination discovered on site. Hazardous Materials or Contamination Issues Specific to this Project:

TLE: epic.dgn

Texas Department of Transportation

No Action Required

Required Action

ENVIRONMENTAL PERMITS,

ISSUES AND COMMITMENTS

EPIC



NOTES	NAME	DATE	Ç
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REVIEWED BY	RL	12/2015	SI 1. C

DN: TxDOT CK: RG DW: VP ck: AR C)TxDOT: February 2015 CONT SECT JOB HIGHWAY GP-2020-0085.PW 12-12-2011 (DS) REVISIONS 5-07-14 ADDED NOTE SECTION IV. COUNTY SHEET NO. -23-2015 SECTION I (CHANGED ITEM 1122 86 OF 89 TXD1) ITEM 506, ADDED GRASSY SWALES.

Design Division

Standard

CROWN

VIOLET

DEPA

RUBÉN LÓPEZ, JR

93745

CENSE

THE SEAL APPEARING ON THIS

DOCUMENT WAS AUTHORIZED BY
RUSEN LOPEZ JR
LIC. # 93745

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COMPLETE, ACCURATE AND ADEQUATE

NCLUDING CONSTRUCTION, BUT ARE NOT

THORIZED FOR CONSTRUCTION UNTIL

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TA EF

Compost Filter Berm and Socks

VII. OTHER ENVIRONMENTAL ISSUES

(includes regional issues such as Edwards Aquifer District, etc.)

No Action Required



Action No.

- 1. THE PROJECT IS LOCATED ON THE EDWARDS AQUIFER RECHARGE ZONE. A TCEQ WATER POLLUTION ABATEMENT PLAN EXCEPTION REQUEST (WPAP-EXP) WAS OBTAINED FOR THE PROJECT.
- 2. COMPLY WITH THE WPAP-EXP AND WPAP-EXP APPROVAL LETTER.
- 3. MAINTAIN COPIES OF THE WPAP-EXP AND WPAP-EXP APPROVAL LETTER ONSITE OR IMMEDIATELY AVAILABLE DURING CONSTRUCTION.
- 4. IF ANY SENSITIVE FEATURE IS ENCOUNTERED DURING CONSTRUCTION, IMPLEMENT THE VOID MITIGATION AND PROTECTION MEASURE AND VOID DISCOVERY PROTOCOL ON THE VOID MITIGATION NOTES PLAN SHEET.

GOLDEN CHEEKED WARBLER BMPS:

- LIMIT THE OPERATION OF HEAVY MACHINERY TO PAVED AREAS, AREAS FREE OF NATIVE VEGETATION. AND TO AREAS WITH SLOPES THAT ARE LESS THAN 33 PERCENT CONSISTING OF STABLE SOILS.
- CONFIRM THE PRESENCE OF LISTED SPECIES AT OR NEAR THE PROJECT SITE THROUGH PRE-CONSTRUCTION SURVEYS OR ASSUME THEY ARE PRESENT AND IMPLEMENT APPROPRIATE PROTECTION MEASURES.
- MINIMIZE IMPACTS TO LISTED SPECIES AND THEIR HABITATS BY LIMITING GRADING OR TOPSOIL REMOVAL TO AREAS WHERE THIS ACTIVITY IS ABSOLUTELY NECESSARY FOR CONSTRUCTION ACTIVITIES.
- SCHEDULE THE MOST EFFECTIVE AMOUNT OF PERSONNEL AND EQUIPMENT TO COMPLETE CONSTRUCTION TO REDUCE THE TIME OF DISTURBANCE TO LISTED SPECIES. AVOID USE OF NON-NATIVE INVASIVE PLANT SPECIES.
- AVOID USE OF NON-NATIVE INVASIVE PLANT SPECIES.
- STERILIZE EQUIPMENT FOR TREE TRIMMING BETWEEN TREES IN AREAS AFFECTED BY SURFACE TRANSFERABLE BACTERIAL, VIRAL, AND FUNGAL DISEASES.
- DO NOT DISTURB, DESTROY, OR REMOVE ACTIVE NESTS DURING THE NESTING SEASON.
- DO NOT COLLECT, CAPTURE, RELOCATE, OR TRANSPORT BIRDS, EGGS, YOUNG, OR ACTIVE NESTS WITHOUT A PERMIT.
- LIMIT THE USE OF MACHINERY IN HABITAT THAT MAY SUPPORT GROUND-NESTING BIRDS DURING THE SPRING AND EARLY SUMMER MONTHS.
- RETAIN EXISTING VEGETATION WHENEVER POSSIBLE.
- USE GENERAL GOOD HOUSEKEEPING PRACTICES AND DO NOT LEAVE WASTE BEHIND ON THE JOB SITE.
- USE CARE TO AVOID SPILLS, LEAKS AND DRIPS OF EQUIPMENT AND CLEANING FLUIDS WHEN CLEANING TOOLS, SERVICING EQUIPMENT OR DOING ROUTINE MAINTENANCE.
- PROJECTS THAT WOULD INVOLVE CLEARING OR TRIMMING OF INDIVIDUAL TREES OR SHRUBS IN OR NEAR (WITHIN 300 FEET OF) POTENTIAL HABITAT WOULD BE PHASED SO THAT ANY CLEARING ACTIVITIES WOULD OCCUR OUTSIDE THE BREEDING SEASON (BETWEEN SEPTEMBER 1st AND FEBRUARY 28th) TO MINIMIZE IMPACTS TO GCW.

PLAINS SPOTTED SKUNK:

• CONTRACTORS WILL BE ADVISED OF POTENTIAL OCCURRENCE IN THE PROJECT AREA, AND TO AVOID HARMING THE SPECIES IF ENCOUNTERED, AND TO AVOID UNNECESSARY IMPACTS TO DENS.

AMPHIBIAN AND AQUATIC REPTILE BMPS:

FOR PROJECTS WITHIN EXISTING RIGHT-OF-WAY (ROW) WHEN WORK IS IN WATER OR WILL PERMANENTLY IMPACT A WATER FEATURE AND POTENTIAL HABITAT EXISTS FOR THE TARGET SPECIES COMPLETE THE FOLLOWING:

THE CONSTRUCTION CONTRACT WILL REFLECT AMPHIBIAN AND AQUATIC REPTILE CONCERNS AND

- A. CONTRACTORS WILL BE ADVISED OF POTENTIAL OCCURRENCE IN THE PROJECT AREA, AND TO AVOID HARMING THE SPECIES IF ENCOUNTERED.
- B. MINIMIZE IMPACTS TO WETLAND, TEMPORARY AND PERMANENT OPEN WATER FEATURES, INCLUDING DEPRESSIONS, AND RIVERINE HABITATS.
- C. MAINTAIN HYDROLOGIC REGIME AND CONNECTIONS BETWEEN WETLANDS AND OTHER AQUATIC FEATURES.
- D. USE BARRIER FENCING TO DIRECT ANIMAL MOVEMENTS AWAY FROM CONSTRUCTION ACTIVITIES AND AREAS OF POTENTIAL WILDLIFE-VEHICLE COLLISIONS IN CONSTRUCTION AREAS DIRECTLY ADJACENT, OR THAT MAY DIRECTLY IMPACT, POTENTIAL HABITAT FOR THE TARGET SPECIES.

- E. APPLY HYDROMULCHING AND/OR HYDROSEEDING IN AREAS FOR SOIL STABILIZATION AND/OR REVEGETATION OF DISTURBED AREAS WHERE FEASIBLE. IF HYDROMULCHING AND /OR HYDROSEEDING ARE NOT FEASIBLE DUE TO SITE CONDITIONS, USING EROSION CONTROL BLANKETS OR MATS THAT CONTAIN NO NETTING, OR ONLY CONTAIN LOOSELY WOVEN NATURAL FIBER NETTING IS PREFERRED. PLASTIC NETTING SHOULD BE AVOIDED TO THE EXTENT PRACTICABLE. THIS MAY BE AN ISSUE; HYDROMULCH VEHICLES ARE TOO BIG AND HEAVY FOR THE TRAIL. WILL INVESTIGATE FIBER NETTING OPTIONS.
- F. PROJECT SPECIFIC LOCATIONS (PSLS) PROPOSED WITHIN STATE-OWNED ROW SHOULD BE LOCATED IN UPLANDS AWAY FROM AQUATIC FEATURES. NO STATE-OWNED ROW.
- G. WHEN WORK IS DIRECTLY ADJACENT TO THE WATER, MINIMIZE IMPACTS TO SHORELINE BASKING SITES (E.G., DOWNED TREES, SAND BARS, EXPOSED BEDROCK) AND OVERWINTER SITES (E.G., BRUSH AND DEBRIS PILES, CRAYFISH BURROWS) WHERE FEASIBLE.
- H. AVOID OR MINIMIZE DISTURBING OR REMOVING DOWNED TREES, ROTTING STUMPS, AND LEAF LITTER, WHICH MAY BE REFUGIA FOR TERRESTRIAL AMPHIBIANS, WHERE FEASIBLE.
- I. IF GUTTERS AND CURBS ARE PART OF THE ROADWAY DESIGN, WHERE FEASIBLE INSTALL GUTTERS THAT DO NOT INCLUDE THE SIDE BOX INLET AND INCLUDE SLOPED (I.E. MOUNTABLE) CURBS TO ALLOW SMALL ANIMALS TO LEAVE ROADWAY. IF THIS MODIFICATION TO THE ENTIRE CURB SYSTEM IS NOT POSSIBLE, INSTALL SECTIONS OF SLOPED CURB ON EITHER SIDE OF THE STORM WATER DRAIN FOR SEVERAL FEET TO ALLOW SMALL ANIMALS TO LEAVE THE ROADWAY. PRIORITY AREAS FOR THESE DESIGN RECOMMENDATIONS ARE THOSE WITH NEARBY WETLANDS OR OTHER AQUATIC FEATURES. N/A FOR PROJECTS THAT REQUIRE ACQUISITION OF ADDITIONAL ROW AND WORK WITHIN THAT NEW ROW IS IN WATER OR WILL PERMANENTLY IMPACT A WATER FEATURE, IMPLEMENT A - I ABOVE PLUS J - I BELOW, WHERE APPLICABLE:
- J. FOR SECTIONS OF ROADWAY ADJACENT TO WETLANDS OR OTHER AQUATIC FEATURES, INSTALL WILDLIFE BARRIERS THAT PREVENT CLIMBING. BARRIERS SHOULD TERMINATE AT CULVERT OPENINGS IN ORDER TO FUNNEL ANIMALS UNDER THE ROAD. THE BARRIERS SHOULD BE OF THE SAME LENGTH AS THE ADJACENT FEATURE OR 80 FEET LONG IN EACH DIRECTION, OR WHICHEVER IS THE LESSER OF THE TWO. N/A
- K. FOR CULVERT EXTENSIONS AND CULVERT REPLACEMENT/INSTALLATION, INCORPORATE MEASURES TO FUNNEL ANIMALS TOWARD CULVERTS SUCH AS CONCRETE WINGWALLS AND BARRIER WALLS WITH OVERHANGS. NO CULVERTS.
- L. WHEN RIPRAP OR OTHER BANK STABILIZATION DEVICES ARE NECESSARY, THEIR PLACEMENT SHOULD NOT IMPEDE THE MOVEMENT OF TERRESTRIAL OR AQUATIC WILDLIFE THROUGH THE WATER FEATURE. WHERE FEASIBLE, BIOTECHNICAL STREAMBANK STABILIZATION METHODS USING LIVE NATIVE VEGETATION, OR A COMBINATION OF VEGETATIVE AND STRUCTURAL MATERIALS SHOULD BE USED.

BIRD BMPS:

- DO NOT DISTURB, DESTROY, OR REMOVE ACTIVE NESTS, INCLUDING GROUND NESTING BIRDS, DURING THE
- NESTING SEASON.
- AVOID THE REMOVAL OF UNOCCUPIED, INACTIVE NESTS, AS PRACTICABLE.
- PREVENT THE ESTABLISHMENT OF ACTIVE NESTS DURING THE NESTING SEASON ON TXDOT OWNED AND OPERATED FACILITIES AND STRUCTURES PROPOSED FOR REPLACEMENT OR RFPAIR.
- DO NOT COLLECT, CAPTURE, RELOCATE, OR TRANSPORT BIRDS, EGGS, YOUNG, OR ACTIVE NESTS WITHOUT PERMISSION.

TERRESTRIAL REPTILE BMPS:

- WHERE POSSIBLE, APPLY HYDROMULCHING AND/OR HYDROSEEDING IN AREAS FOR SOIL STABILIZATION AND/OR REVEGETATION OF DISTURBED AREAS WHERE FEASIBLE. IF HYDROMULCHING AND/OR HYDROSEEDING ARE NOT FEASIBLE DUE TO SITE CONDITIONS, UTILIZE EROSION CONTROL BLANKETS OR MATS THAT CONTAIN NO NETTING OR CONTAIN LOOSELY WOVEN, NATURAL FIBER NETTING IS PREFERRED. PLASTIC NETTING SHOULD BE AVOIDED TO THE EXTENT PRACTICABLE.
- FOR OPEN TRENCHES AND EXCAVATED PITS, INSTALL ESCAPE RAMPS AT AN ANGLE OF LESS THAN 45 DEGREES (1:1) IN AREAS LEFT UNCOVERED. VISUALLY INSPECT EXCAVATION AREAS FOR TRAPPED WILDLIFE PRIOR TO BACKFILLING.
- INFORM CONTRACTORS THAT IF REPTILES ARE FOUND ON PROJECT SITE ALLOW SPECIES TO SAFELY LEAVE THE PROJECT AREA.
- AVOID OR MINIMIZE DISTURBING OR REMOVING DOWNED TREES, ROTTING STUMPS, AND LEAF LITTER WHERE FEASIBLE.
- CONTRACTORS WILL BE ADVISED OF POTENTIAL OCCURRENCE IN THE PROJECT AREA, AND TO AVOID HARMING THE SPECIES IF ENCOUNTERED.
- DUE TO INCREASED ACTIVITY (MATING) OF REPTILES DURING THE SPRING, CONSTRUCTION ACTIVITIES LIKE CLEARING OR GRADING SHOULD ATTEMPT TO BE SCHEDULED OUTSIDE OF THE SPRING (APRIL-MAY) SEASON. ALSO, TIMING GROUND DISTURBING ACTIVITIES BEFORE OCTOBER WHEN REPTILES BECOME LESS ACTIVE AND MAY BE USING BURROWS IN THE PROJECT AREA IS ALSO ENCOURAGED.

BAT BMPS:

- IF BATS ARE PRESENT OR RECENT SIGNS OF OCCUPATION (I.E., PILES OF GUANO, DISTINCT MUSKY ODOR. OR STAINING AND RUB MARKS AT POTENTIAL ENTRY POINTS) ARE OBSERVED, TAKE APPROPRIATE MEASURES TO ENSURE THAT BATS ARE NOT HARMED, SUCH AS IMPLEMENTING NONLETHAL EXCLUSION ACTIVITIES OR TIMING OR PHASING OF CONSTRUCTION.
- LARGE HOLLOW TREES, SNAGS (DEAD STANDING TREES), AND TREES WITH SHAGGY BARK SHOULD BE SURVEYED FOR COLONIES AND, IF FOUND, SHOULD NOT BE DISTURBED UNTIL THE BATS ARE NO LONGER OCCUPYING THESE FEATURES. POST-OCCUPANCY SURVEYS SHOULD BE CONDUCTED BY A QUALIFIED BIOLOGIST PRIOR TO TREE REMOVAL FROM THE LANDSCAPE.
- RETAIN MATURE, LARGE DIAMETER HARDWOOD FOREST SPECIES AND NATIVE/ORNAMENTAL PALM TREES WHERE FEASIBLE.
- IN ALL INSTANCES, AVOID HARM OR DEATH TO BATS. BATS SHOULD ONLY BE HANDLED AS A LAST RESORT AND AFTER COMMUNICATION WITH TPWD.

VEGETATION BMPS:

- MINIMIZE THE AMOUNT OF VEGETATION CLEARED. REMOVAL OF NATIVE VEGETATION, PARTICULARLY MATURE NATIVE TREES AND SHRUBS SHOULD BE AVOIDED TO THE GREATEST EXTENT PRACTICABLE.
- WHEREVER PRACTICABLE. IMPACTED VEGETATION SHOULD BE REPLACED WITH IN-KIND ON-SITE REPLACEMENT/RESTORATION OF NATIVE VEGETATION.
- TO MINIMIZE ADVERSE EFFECTS, ACTIVITIES SHOULD BE PLANNED TO PRESERVE MATURE TREES, PARTICULARLY ACORN, NUT OR BERRY PRODUCING VARIETIES. THESE TYPES OF VEGETATION HAVE HIGH VALUE TO WILDLIFE AS FOOD AND COVER.
- THE USE OF ANY NON-NATIVE VEGETATION IN LANDSCAPING AND REVEGETATION IS DISCOURAGED.
- LOCALLY ADAPTED NATIVE SPECIES SHOULD BE USED.
- THE USE OF SEED MIX THAT CONTAINS SEEDS FROM ONLY LOCALLY ADAPTED NATIVE SPECIES IS RECOMMENDED.
- AVOID VEGETATION CLEARING ACTIVITIES DURING THE GENERAL BIRD NESTING SEASON, MARCH THROUGH AUGUST, TO MINIMIZE ADVERSE IMPACTS TO BIRDS.

INVASIVE SPECIES BMPS:

COLONIZATION BY INVASIVE PLANTS SHOULD BE ACTIVELY PREVENTED ON DISTURBED SITES IN TERRESTRIAL HABITATS. VEGETATION MANAGEMENT SHOULD INCLUDE REMOVING INVASIVE SPECIES AS SOON AS PRACTICAL WHILE ALLOWING THE EXISTING NATIVE PLANTS TO REVEGETATE THE DISTURBED AREAS. IF USING HAY BALES FOR SEDIMENT CONTROL, USE LOCALLY GROWN WEED-FREE HAY TO PREVENT THE SPREAD OF INVASIVE SPECIES. LEAVE THE HAY BALES IN PLACE AND ALLOW THEM TO BREAK DOWN, AS THIS ACTS AS MULCH ASSISTING IN REVEGETATION.

Texas Department of Transportation

TLE: epic.dgn

12-12-2011 (DS)

C)TxDOT: February 2015

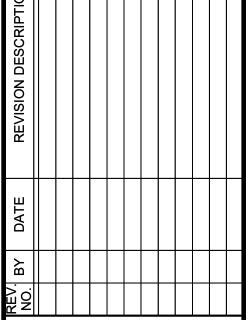
05-07-14 ADDED NOTE SECTION IV.

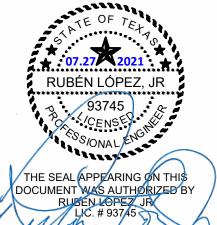
ITEM 506, ADDED GRASSY SWALES.

1-23-2015 SECTION | (CHANGED ITEM 1122

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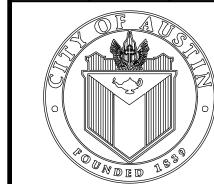
ISSUES AND COMMITMENTS





COMPLETE, ACCURATE AND ADEQUATE OR THEIR INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL FORMAL CITY APPROVAL

WO 100 CROWN PHASI L PI DEPA ENGIN VIOLET TA EF



NAME DATE SURVEY BY QMD 12/2015 DRAWN BY IMV 12/2015 DESIGNED BY 12/2015 IMV CHECKED BY ESD 12/2015 12/2015 REVIEWED BY RL

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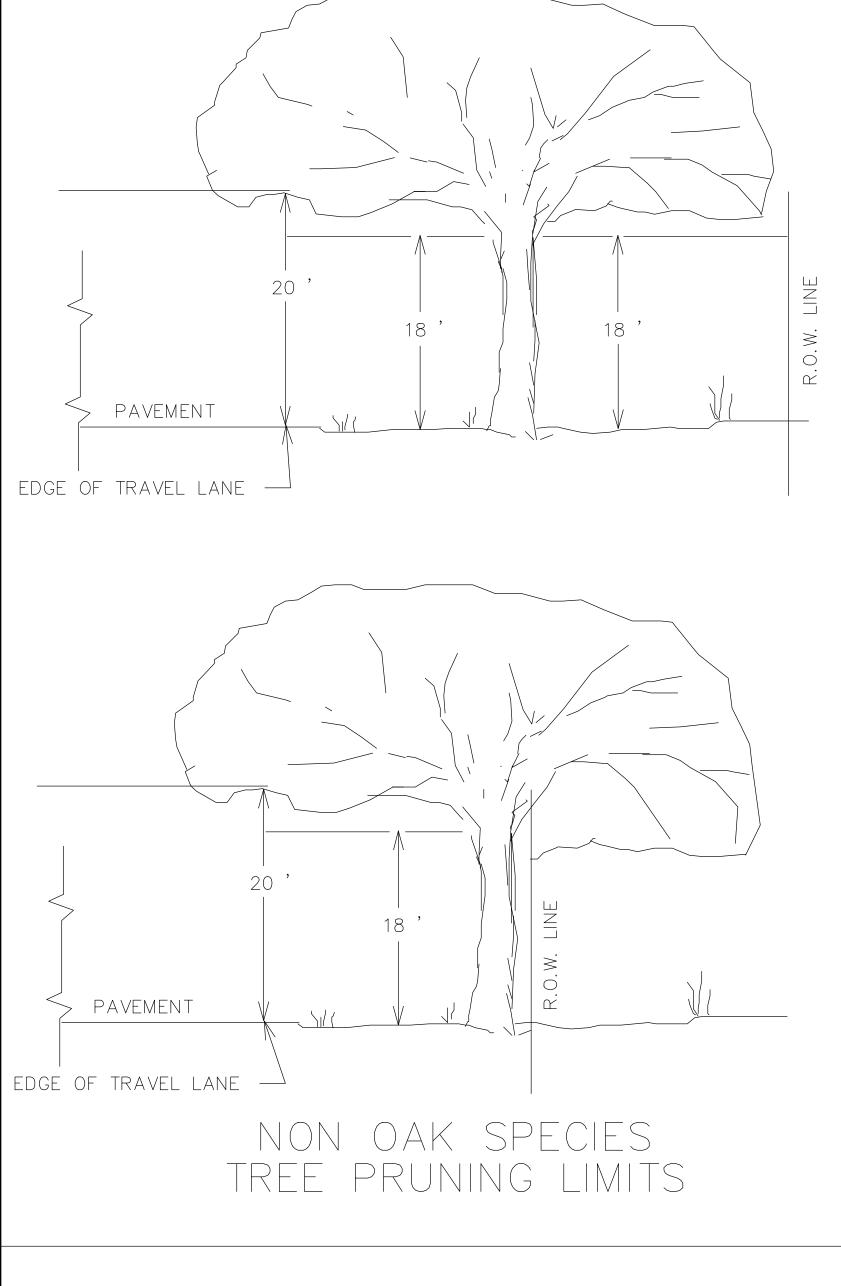
Design

Division

Standard

2 OF 2

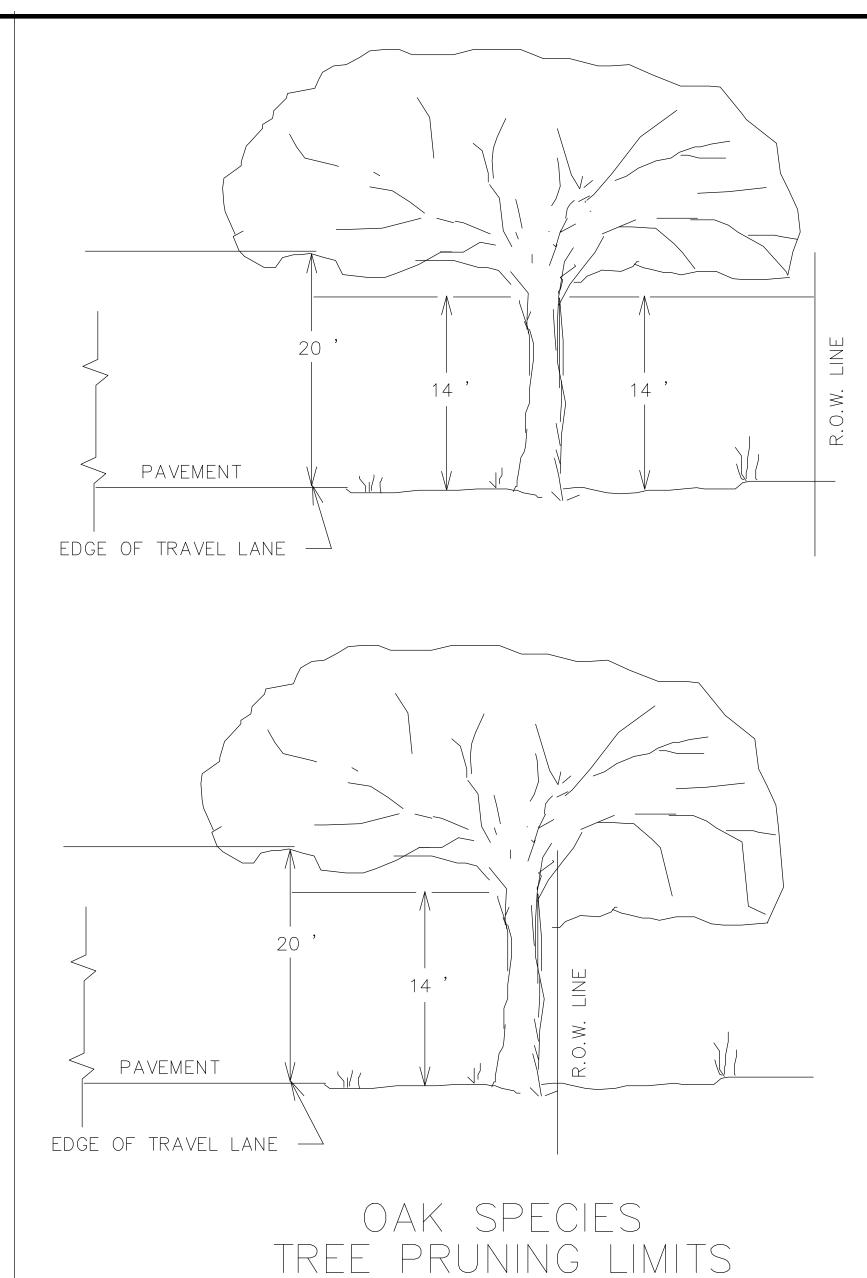
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_STEP 2:

REMOVE LIMB 4-6" BEYOND THE FIRST

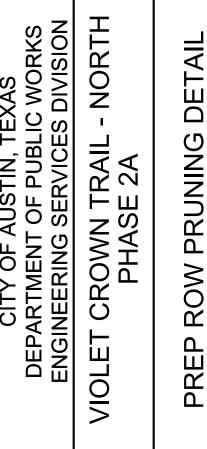
FOR LIMBS 2" IN DIA. AND GREATER



GENERAL NOTES:

PAYMENT FOR THIS WORK IS SUBSIDIARY TO PREP ROW

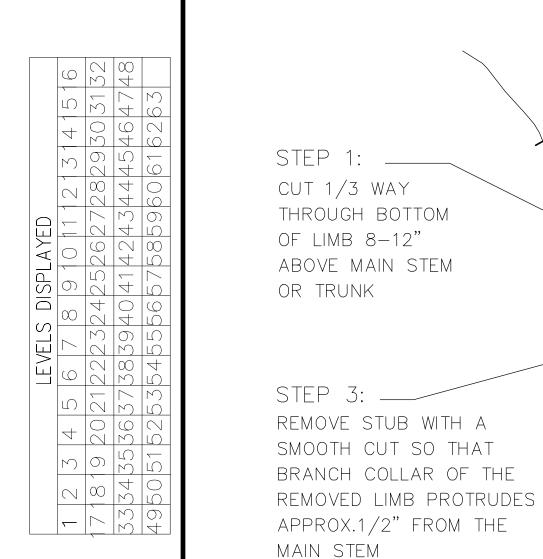
- 1. REMOVE ALL DEAD TREES, DEAD SHRUBS, AND THE DEAD MULTI—TRUNKED TRUNKED TREES WITHIN THE ROW. TREES, SHRUBS OR MULTI—TRUNKED TREES THAT DIE DURING CONSTRUCTION SHALL BE REMOVED PRIOR TO COMPLETION OF THE PROJECT. THE STUMP SHALL BE CUT FLUSH WITH THE GROUND.
- 2. WHEN PRUNING OAK TREES, DISINFECT TOOLS WITH 70 PERCENT METHYL ALCOHOL, CHLORINE SOLUTION, OR OTHER APPROVED DISINFECTANT BEFORE MOVING FROM ONE TREE TO ANOTHER.
- 3. TREAT ALL WOUNDS AND CUTS ON ALL SPECIES OF OAKS WITH A COMMERCIAL TREE WOUND DRESSING WITHIN 15 MINUTES OF CUTTING.
- 4. FLAILING EQUIPMENT IS NOT ALLOWED FOR THIS WORK.
- 5. AT CONTRACTORS EXPENSE, REPAIR DAMAGE TO A PRIVATE FENCE OR PRIVATE PROPERTY.
- 6. PERFORM TREE PRUNING ONLY WITHIN THE ROW. NO CUTS SHALL BE MADE OUTSIDE THE ROW.
- 7. CUT LIMBS AT A MAJOR FORK IN THE BRANCH OR IF THE ENTIRE LIMB IS ENCROACHING INTO THE AREA TO BE CLEARED, REMOVE THE BRANCH AT THE TRUNK. MAKE PRUNING CUTS TO NOT LEAVE A STUB AND WITHOUT CUTTING INTO THE BRANCH COLLAR. GENERALLY, THE BRANCH COLLAR IS VISIBLE. IF IT IS NOT VISIBLE, MAKE THE FINAL CUT APPROXIMATELY 1/2IN. FROM THE PARENT LIMB OR TRUNK.
- 8. PEFORM TREE PRUNING PER DETAIL FOR ENTIRE ROW AREA WITHIN PROJECT LIMITS. THE ENGINEER MAY DEFINE AREAS TO RESTRICT TREE PRUNING.
- 9. REVIEW EPIC SHEETS FOR AREAS TO BE AVOIDED DUE TO ENVIRONMENTAL REASONS OR ADDITIONAL NOTES THAT PERTAIN TO TREE PRUNING.
- 10. TRIM TREES OUTSIDE THE MIGRATORY BIRD NESTING SEASON OF MARCH 1ST THRU SEPTEMBER 15TH. TRIM DURING THE NESTING SEASON AS APPROVED BY THE ENGINEER FOR PROJECTS WITH ENTIRE DURATION DURING THE NESTING SEASON.
- 11. NO TRIMMING OF THE VEGETATION THAT CONTAINS AN ACTIVE NEST FOR MIGRATORY BIRDS.

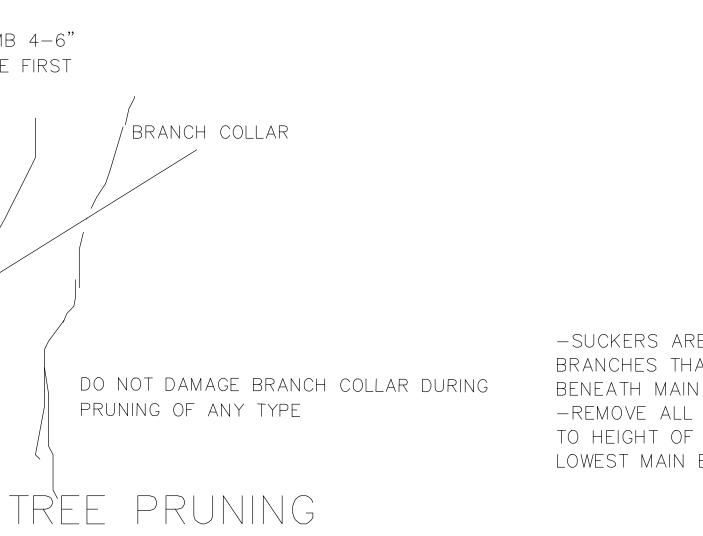


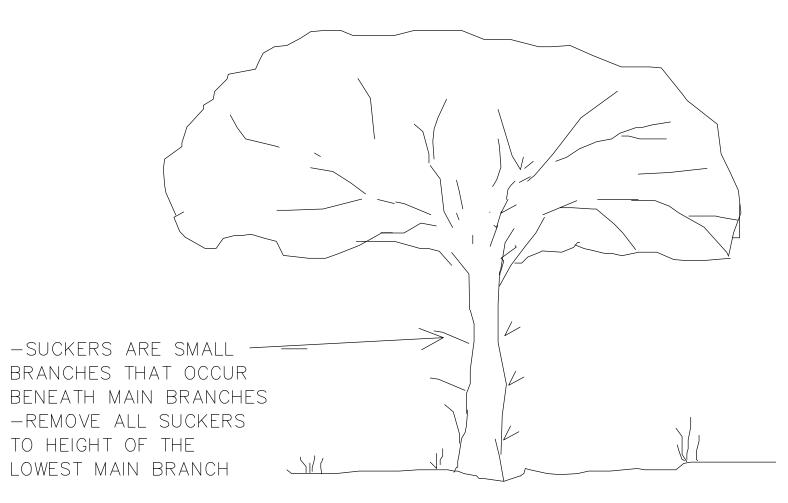
RUBÉN LÓPEZ, JR

DOCUMENT WAS AUTHORIZED B

THORIZED FOR CONSTRUCTION UNTIL







SUCKER REMOVAL DETAIL

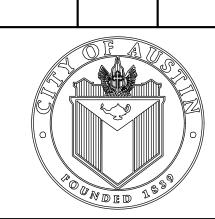


Design Division Standard

PREP ROW PRUNING DETAIL

SHEET 1 OF 1 NOT TO SCALE

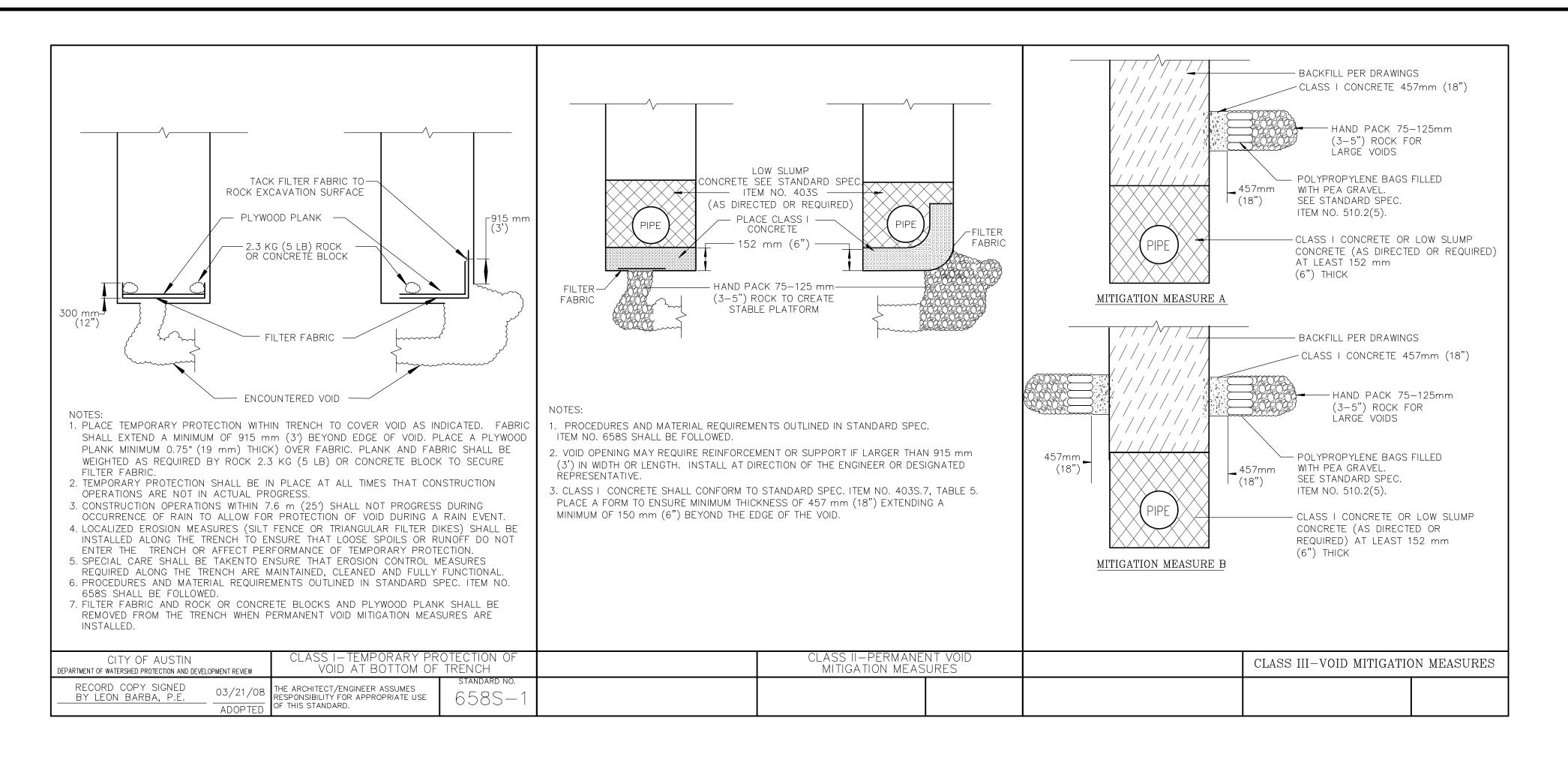
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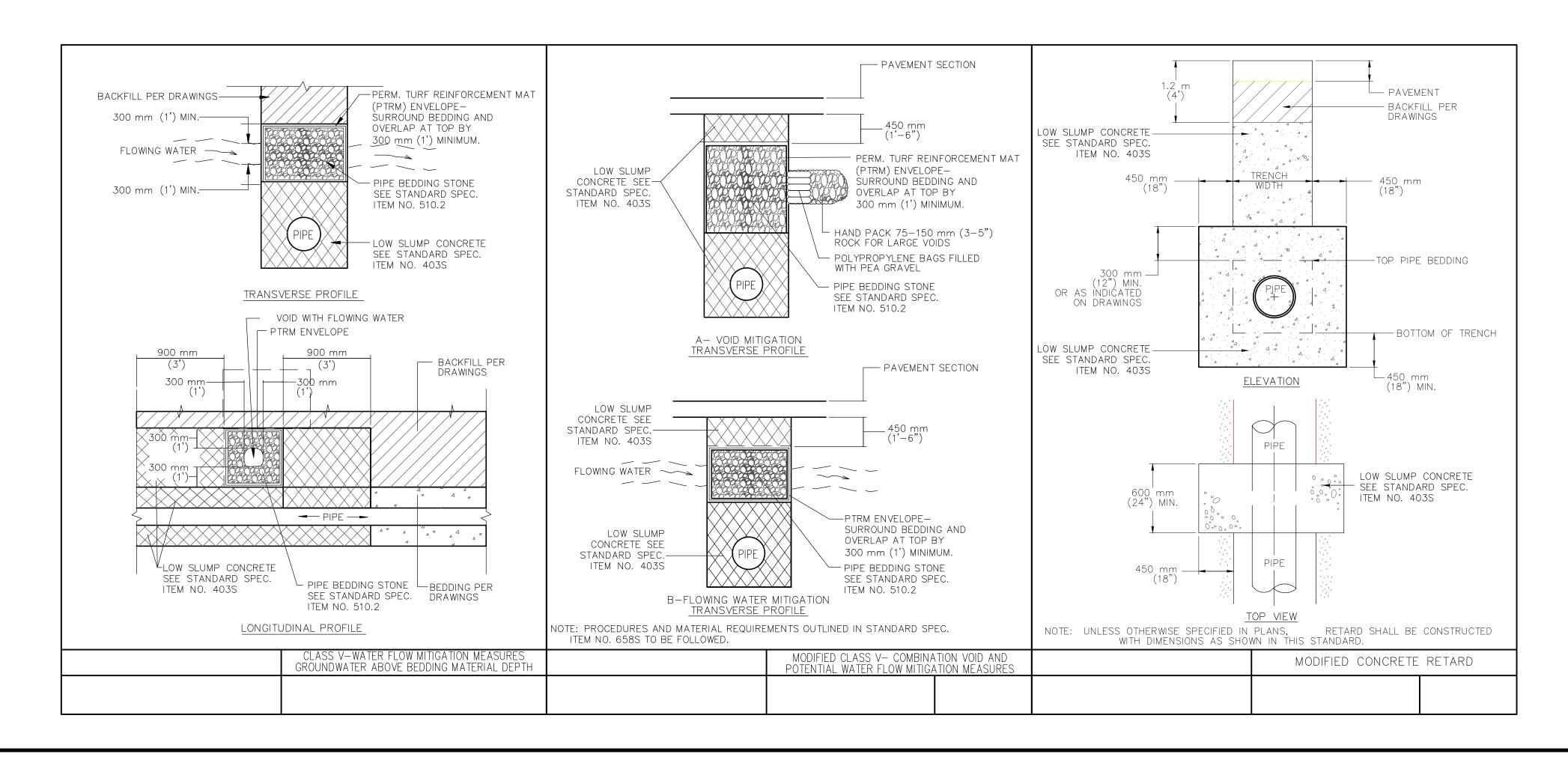


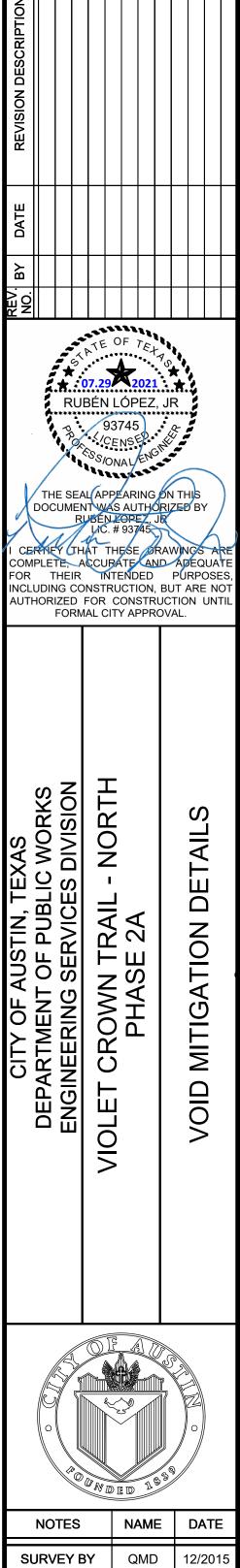
NOTES	NAME	DATE
SURVEY BY	QMD	12/2015
DRAWN BY	IMV	12/2015
DESIGNED BY	IMV	12/2015
CHECKED BY	ESD	12/2015
REVIEWED BY	RL	12/2015

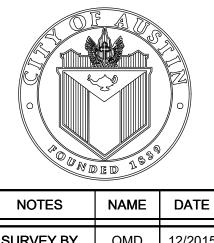
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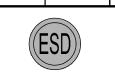








NOTES	NAME	DATE
SURVEY BY	QMD	12/2015
DRAWN BY	IMV	12/2015
DESIGNED BY	IMV	12/2015
CHECKED BY	ESD	12/2015
REVIEWED BY	RL	12/2015



Engineering Services DIVISION

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